US Army Corps
of Engineers
Savannah District

Hunter Army Airfield
Georgia

Solicitation Number
DACA21-03-R-0070
Ranger Barracks Complex
Volume IV of IV – Asbestos Reports
FY-04, Line Item 51127
November 2003

THIS SOLICITATION IS UNRESTRICTED PURSUANT TO THE "BUSINESS OPPORTUNITY DEVELOPMENT REFORM ACT OF 1988" (PUBLIC LAW 100-656)

U.S. ARMY ENGINEER DISTRICT, SAVANNAH
CORPS OF ENGINEERS
100 WEST OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3640

Savannah District
Environmental and Materials Unit

US Army Corps of Engineers®

Asbestos Survey

Building No. 1275 Hunter Army Air Field, Georgia

Prepared by Timothy A. Jones

Asbestos Survey **January 2003**

Building No. 1275 Hunter Army Air Field, Georgia

bv Timothv A. Jones

Final report

Prepared for **US Army Corps of Engineers**
Savannah District

Asbestos Inspection Report

Introduction

Scope of the Investigation

This report documents the asbestos inspection and survey of Building No.1275 at Hunter Army Air Field; Georgia conducted 21-22 October 2002 by Savannah District US Army Corps of Engineers employees Tim Jones, and Mike Ruth. The survey was conducted in general accordance with the regulatory guidelines in the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763 Subpart E Sections 763.80-763.88) and "Guidance for Controlling Asbestos-Containing Materials in Buildings" (Purple Book) (EPA publication number 560/5-85-024). Although not required by the AHERA guidelines, roof and other exterior miscellaneous materials were also inspected and sampled.

Background

Building No. 1275 is a 1950s vintage three-story structural concrete and masonry frame structure with multi-layered built-up asphalt and felt roof systems over structural concrete. The floor systems are structural concrete covered generally with vinyl tile. The exterior of the building has been renovated at some time and covered with a stucco material over expandable polystyrene and cloth mesh, effectively hiding the original exterior structure and hindering inspection of that original finish. The building is divided into five main sections. The center section is two story with the first incorporating a commercial type kitchen/dining facility and the second story divided between recreational areas, storage areas, Post Office, offices, two restrooms and a mechanical room. The four remaining sections are identical three story barracks wings. The barracks rooms are laid out such that generally two sleeping quarters share one bathroom and storage room, with the exception that the two outer end sleeping rooms do not share restrooms. Each floor has a separate janitor's closet, laundry room and storage room. The uppermost floor's storage room contains an access opening to the roof of that particular wing. The roofs of the four wings are identical in appearance. Rooms on the building floor plans are arbitrarily numbered for identification in this report only as indicated on Figures 1-3.

Description of study

Investigation

All accessible areas of Building No. 1275 were visually inspected for suspected asbestos containing materials (ACM) by accredited inspectors, with the exception of the identical barracks sleeping rooms which were randomly inspected, to verify and supplement the partial asbestos inspection by Air-Safe Environmental, Inc. dated May 12, 2000. Bulk samples of all suspected ACM's not previously sampled were collected. Sample locations are indicated on the floor plan Figures. Individual Figures are presented for the center hub sections of the building. Typical floor plans are presented to represent the four barracks wings and the sample numbers represent the wing and floor numbers as well as the numerical sequential sample number. An example is sample 1275-1N-2 indicates building 1275, first floor North wing, sequential sample number 2. This report details ACM as identified at the time of inspection only.

The bulk samples were analyzed by Hygeia Laboratories, Inc. Hygeia is accredited by the National Voluntary Laboratory Accredited Program (NVLAP Accreditation sponsored by the National Institute of Standards and Technology (NIST)). Copies of their accreditation certificates are included in Appendix C. The samples were analyzed by the accepted method of polarized light microscopy (PLM) using EPA's "Method For the Determination of Asbestos In Bulk Building Materials", EPA/600/R-93/116. Hygeia's analytical report is included in Appendix A.

In compliance with the AHERA regulations, material is considered an Asbestos Containing Material (ACM) when it contains greater than one percent asbestos. Likewise, in this report, any material containing concentrations greater than one percent asbestos will be considered "positive". Occasionally, materials containing less than one percent asbestos are assumed to be a "positive" asbestos containing material at the discretion of the inspectors. A narrative discussion of the AHERA ACM types (i.e., thermal systems insulation, miscellaneous and surfacing materials) found in Building No. 1275 is included in this report where relevant. Bulk sample information appears on Table 1. Estimated quantities of individual asbestos containing materials appear on Table 2. Material characterization of asbestos containing materials appears on Table 3. The specific location where each bulk sample was obtained is shown on the building floor plans, which appear as Figures. Positive ACM samples are highlighted on the floor plan Figures and, where possible, locations of positive ACM are identified. It is reasonable to assume that all materials similar to those testing positive, also contain positive amounts of asbestos and should be treated as such.

Analysis

Thermal Systems Insulation (TSI)

TSI is insulation material applied to pipes, fittings, tanks, ducts, or for other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.

a. *TSI Domestic Water Piping:* The majority of pipe runs of the domestic water system throughout the building, with the exception of the first floor Mechanical Room D121, contain asbestos. This material is typically approximately one-inch thick corrugated paper type with layers of friable white asbestos materials within. The molded fittings on the domestic water piping, though testing negative, are assumed to contain asbestos due to their proximity and binding with the pipe run insulation. In some small areas the insulation has been removed or replaced, however for estimation purposes within this report, the insulation is assumed to remain. Plumbing chases in the barracks sleeping area restrooms were inaccessible for inspection and the water piping within is assumed to contain similar asbestos containing insulation. The outer dimensions of this asbestos-containing TSI typically ranges from 3-5 inches. The domestic water piping within the first floor Mechanical Room D121 appears to have been replaced with newer fiberglass TSI -(Refer to Tables 1, 2 and 3 for specific information, and figures for sample locations and homogeneous area locations).

b. *TSI HVAC Water Piping:* The HVAC hot, cold and dual temperature water piping throughout the building is of fiberglass or rubber non-ACM material.

c. *TSI Storm Drainage Piping:* The pipe runs and fittings on much of the storm drainage piping from the roof drains on the interior of the building are assumed to contain asbestos. Similar pipe run material tested on Building 1276 was found to be asbestos containing. This material is typically one to one and a half inch thick, 8” outer diameter, white friable material. Molded fitting material tested in Building 1276 was found to be non-asbestos containing, but will be assumed positive due to proximity and attachment to friable asbestos pipe run material. Some material on the second floor Recreation Area piping appears to be replaced with newer fiberglass material. Material in chases is assumed to be similar asbestos containing insulation. Insulation on all of the exterior storm drain piping appears to have been replaced with fiberglass material. -(Refer to Tables 2 and 3 for specific information and Figures for homogeneous area locations).

d. *TSI Refrigeration Suction Lines:* Some of the insulation on what appears to be refrigeration suction lines at the Can Wash Room D125 is coated with a black mastic vapor barrier/weather protectant that is asbestos containing. -(Refer to Tables 1, 2 and 3 for specific information and Figures for sample locations and homogeneous area locations).

e. TSI Underground HVAC Piping: The insulation on the steam and condensate piping within the exterior valve pit and underground from the pit to Building 1275 is assumed to contain asbestos based on similar positive samples from Building 1276. This material is white pre-formed block insulation of approximately 12" diameter. The mastic sealer over the joints and ends of the foam-glass insulation on the dual temperature water lines in the exterior valve pit and underground from the pit to Building 1275 is assumed to contain asbestos based on similar positive samples from Building 1276. Debris from the material may be found in the pit inside Mechanical Room D121 where the steam and condensate piping system enters the building. The valve pits are located to the east of the south barracks wing.-(Refer to Tables 2 and 3 for specific information).

Miscellaneous Materials

Miscellaneous materials include building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and do not include surfacing or TSI.

In the past, there were a great number of miscellaneous building materials that had asbestos fibers added to them during the manufacturing process to increase durability and fireproofing qualities. The following suspect miscellaneous materials at Building No. 1275 were found to contain or were assumed to contain asbestos:

a. Floor Tiles And Mastic: 12" X 12" floor tiles and associated mastic throughout the majority of Building 1275 contain or assumed to contain asbestos. 12" X 12" dark gray floor tile and mastic in the Dining area D104 both contain asbestos. 12" X 12" beige/brown/white floor tiles and mastic in the Recreation Area both contain asbestos. 12" X 12" brown/tan/white floor tiles in the corridors of the barracks wings were non-asbestos, however their associated mastic contains asbestos. 12" X 12" beige patterned floor tiles and their associated mastic typical in the barracks sleeping rooms both contain asbestos. Small areas of patch tiles located in several areas were non-asbestos but quantities are insignificant. 12" X 12" dark brown floor tiles and mastic in the Janitor's Closet Room D117, Women's Locker Room D113 and Men's Locker Room D116 are non-asbestos-(Refer to Tables 1, 2 and 3 for specific information and Figures for sample locations and homogeneous area locations).

b. Floor Joint Sealer: Black Floor joint sealer in the many of the Storage Rooms associated with the barracks rooms contains asbestos. This material is typically 8" wide and ¼ " thick. -(Refer to Tables 1, 2 and 3 for specific information and Figures for sample locations homogeneous area locations).

c. Window Glazing Compound: Window glazing compound applied to the windows in the vicinity of the first floor Mechanical Room D121 contains asbestos. The remainder of the windows has been replaced with newer aluminum frame components and is non-asbestos containing- (Refer to Tables 1, 2 and 3 for specific information and Figures for sample locations homogeneous area locations).

d. Window Caulking Compound: Caulking compound around the metal window frame at the first floor Mechanical Room D121 contains asbestos. -(Refer to Tables 1, 2 and 3 for specific information and Figures for sample locations and homogeneous area locations).

e. Fire Rated Doors: Fire rated doors were not sampled since destruction of the door would be required. As a result, all such doors are assumed to be asbestos containing. One hundred and ten doors of seven types are listed in the door schedule on as built drawing dated 1979 Plate A17 from the Barracks Modernization project of that time frame. It is suggested that one door of each type be inspected at demolition to determine if asbestos is present. -(Refer to Tables 2 and 3 for specific information and Figures for homogeneous area locations).

f. Gaskets: Gaskets between flanges in the mechanical piping systems are assumed to contain asbestos. The majority of these will be found in Mechanical Room D121 and are not indicated on a floor plan Figure.

Surfacing Materials

Surfacing material is friable material that is sprayed on, troweled on, or otherwise applied to surfaces for decorative or other purposes.

a. Silver Surfacing Material: Silver brushed on surfacing material commonly referred to as “Cool Seal” located on the air handler and other structures installed on the Recreation Area roof contain asbestos- (Refer to Tables 1, 2 and 3 for specific information and Figures for sample locations and homogeneous area locations).

Conclusions

The following materials found at Building No. 1275 contain or are assumed to contain positive amounts of asbestos:

a. *Floor Tile & Mastic:* Floor tiles and or mastic throughout Building 1275 contain asbestos.

b. *Floor Joint Sealer:* Floor joint sealer in many of the barracks storerooms contains asbestos.

c. *TSI Pipe Insulation:* TSI pipe run and fitting insulation on the domestic water piping within the main building contains asbestos. TSI pipe run and fitting insulation on portions of the storm drainage piping system inside the building contains asbestos. TSI pipe insulation coating material on refrigeration suction lines outside of the kitchen entrance contains asbestos. TSI pipe run and fitting material on the steam and condensate lines in the exterior valve pit and underground to the building is assumed to contain asbestos. TSI mastic on the joints and seams of the dual temperature water piping in the valve pit and underground is assumed to contain asbestos.

d. *Window Glazing Material:* Window glazing material on windows near the first floor Mechanical Room D121 contains asbestos.

e. *Window Caulking Material:* Window caulking material on the window frame at the first floor Mechanical Room D121 window contains asbestos.

f. *Silver Surfacing Material:* Silver surfacing material ("Cool Seal") on structures on the Recreation Area roof contains asbestos.

g. *Fire Rated Doors:* Fire rated doors are assumed to contain asbestos.

h. *Gaskets:* Gaskets within the mechanical piping systems are assumed to contain asbestos.

List of Tables

List of Figures

Appendices

TABLE 1
SUSPECT ACM SAMPLES
HUNTER ARMY AIRFIELD, BUILDING 1275

FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE & %
1275-1N-1	**12" x 12" brn/tan/white floor tile & mastic**	**Corridor, 1st floor north wing**	**Tile NAD, mastic 2% chrysotile**
1275-1N-2	12" X 12" tan/blk/gray floor tile & mastic	Corridor, 1st floor north wing, patch tile	None
1275-1N-3	**12" X 12" beige patterned floor tile & mastic**	**Room 104, north wing, typical of all sleeping room tile**	**Tile 3% chrysotile, mastic 2% chrysotile**
1275-1N-4	2' X 4' ceiling tile, worm hole & pin holes, newer looking	Corridor, 1st floor north wing	None
1275-1N-5	2' X 4' ceiling tile, large worm hole, fewer pin holes	Corridor, 1st floor north wing	None
1275-1N-6	2' X 4' ceiling tile, pin holes w radial pattern	Corridor, 1st floor north wing	None
1275-1N-7	Drywall joint compound	Room 107, north wing, near window	None
1275-1N-8	Wall plaster	Restroom 136, north wing	None
1275-1N-9	Popcorn type ceiling surfacing	Laundry room 123, north wing	None
1275-1N-10	Drywall joint compound	Laundry room 123, north wing, wall	None
1275-2N-11	**Floor joint sealer**	**Storeroom at room 224, north wing**	**20% chrysotile**
1275-2N-12	Drywall joint compound	Storeroom at room 237, north wing	None
1275-2N-13	**TSI pipe run insulation**	**Domestic hot water pipe, utility room 202, north wing**	**10% chrysotile**
1275-3N-14	**12" X 12" beige patterned floor tile & mastic**	**Room 309, north wing, typical of all sleeping room tile**	**Tile 2% chrysotile, mastic 3% chrysotile**
1275-2RAM-15	Floor joint sealer	Recreation Area mechanical room R209	None

1275-2RAM-16	Drywall joint compound	Recreation Area mechanical room R209, above breaker box	None
1275-2RAM-17	Duct flex joint	Recreation Area mechanical room R209	None
1275-2RA-18	**12” X 12” beige/brn/white floor tile & mastic**	**Game area, Room R212, typical floor tile for Recreation Area**	**Tile 2% chrysotile, mastic 4% chrysotile**
1275-2RA-19	Drywall joint compound	Game Area, Room R212, west wall at window	None
1275-2RA-20	Drywall joint compound	Seating Area, Room R211, interior wall	None
1275-2RA-211	12” X 12” gray floor tile	Seating Area, Room R211, patch tile	None
1275-2RA-22	Drywall joint compound	Recreation Area, north exterior wall	None
1275-RAR-23	Multi-layer built-up roofing membrane	Recreation Area roof field	None
1275-RAR-24	Roof insulation	Recreation Area roof field, under sample 23	None
1275-RAR-25	Gray flashing & cement	Recreation Area roof, at base of air handler	None
1275-RAR-26	**Silver “Cool Seal” surfacing material**	**Recreation Area roof, on air handler system**	**25% chrysotile**
1275-RE-27	Multi-layer built-up roofing membrane	East wing roof field	None
1275-RE-28	Gray flashing & cement	East wing roof, at base of roof vent	None
1275-RE-29	Rolled roofing flashing, multi-layered	East wing roof, at base of parapet wall	None
1275-3E-30	Wall sleeve packing	East wing, third floor corridor, near laundry	None
1275-1W-31	**12” X 12” tan/brn/white floor tile & mastic**	**West wing, Room 112, patch tile**	**Tile NAD, mastic 4% chrysotile**
1275-2W-32	**12” X 12” light gray/blk floor tile & mastic**	**West wing Room 225**	**Tile 3% chrysotile, mastic 4% chrysotile**
1275-2S-33	Popcorn type ceiling surfacing	Laundry room 223, South wing	None

1275-2S-34	Drywall joint compound	Laundry room 223, South wing, exterior wall	None
1275-1E-35PV	TSI Molded pipe valve insulation, 4”OD, domestic water	Corridor ceiling, first floor, east wing	None
1275-E-36PR	**TSI pipe run insulation, domestic hot water return, 3” OD**	**Electrical Room D120**	**20% chrysotile**
1275-E-37PR	**TSI pipe run insulation, domestic hot water supply, 3” OD**	**Electrical Room D120**	**10% chrysotile**
1275-E-38PR	**TSI pipe run insulation, domestic cold water supply, 5” OD**	**Electrical Room D120**	**10% chrysotile**
1275-EX-39	**Window glazing compound**	**Exterior of window, Mechanical Room D121**	**5% chrysotile**
1275-EX-40	**Window frame caulking compound**	**Exterior of window, Mechanical Room D121**	**5% chrysotile**
1275-EX-41	TSI Pipe jacket, 12” OD	Exterior of Mechanical Room D121, north side, where pipe exits wall & enters ground	None
1275-1-42	Walk in cooler wall insulation & mastic	Garbage refrigerator, Room D124	None
1275-1-43	**TSI mastic insulation coating, 2” OD**	**Refrigeration suction line, at door of Can Wash Room D125**	**10% chrysotile**
1275-1-44	2’ X 2’ ceiling tile, off white	Dry Storage, Room D118	None
1275-1-45	2’ X 2’ ceiling tile, white	Dry Storage, Room D118	None
1275-1-46	12” X 12” dark brown floor tile & mastic	Men’s Locker Room D116 (also found in Women’s Locker Room D113 and Janitor Room D117)	None
1275-1-47	Drywall joint compound	Men’s Locker Room D116	None
1275-1-48	Wall plaster	Office, Room D112	None

1275-1-49PR	**TSI pipe run insulation, domestic hot water supply, 5" OD**	**Office, Room D112**	**12% chrysotile**
1275-1-50PR	**TSI pipe run insulation, domestic cold water supply, 5" OD**	**Office, Room D112**	**10% chrysotile**
1275-1-51	Drywall joint compound/plaster	Office, Room D112	None
1275-1-52	12" X 12" brown/white/red floor tile & mastic	Carbonated Beverage Room D105	Tile NAD, mastic <1% chrysotile
1275-1-53	Sheet vinyl flooring, terrazzo colored	Dining Room D104, perimeter	None
1275-1-54	**12" X 12" dark gray floor tile & mastic**	**Dining Room D104, majority of room**	**Tile 3% chrysotile, mastic 2% chrysotile**
1275-1-55	12" X 12" tan/brown floor tile & mastic	Dining Room D104, patch tile	None
1275-1-56	12" X 12" white/gray floor tile & mastic	Dining Room D104, patch tile	None
1275-1-57	Felt paper	Exterior wall of Dining Room D104, against framing	None
1275-EX-58	Felt paper	Exterior wall of east wing, under stucco	None
1275-RA-59	Drywall joint compound	Recreation Area, Room R208, wall	None

Samples testing positive for asbestos indicated in **BOLD** type
NAD = No Asbestos Detected

TABLE 2
ACM QUANTITY SUMMARY
HUNTER ARMY AIRFIELD, BUILDING 1275

Material Description	UNITS	Area Descriptions								
		EXTERIOR WIMDOW FRAMES	KITCHEN & DINING	RECREATION AREA	TYPICAL BARRACKS WINGS	RECREATION AREA ROOF	BARRACKS WINGS SLEEPING ROOMS STORAGE CLOSETS	MECHANICAL ROOMS		TOTALS
Caulking Material	L.F.	125								125
Window Glazing Compound	L.F. 1" Wide	250								250
Floor Tile & Mastic	S.F.		3,714	9,130	56,892					69,736
Floor Joint Sealer	S.F.						1,408			1,408
"Cool Seal" Surfacing	S.F.					600				600
Fire Rated Doors	EA				118					118
Gaskets	Ea.							100		100

Material Description	UNITS	Area Descriptions								
		EXTERIOR WINDOW FRAMES	KITCHEN & DINING	RECREATION AREA	TYPICAL BARRACKS WINGS	RECREATION AREA ROOF	MECHANICAL ROOM D121	ELECTRICAL ROOM D120	EXTERIOR AT CAN WASH ROOM	TOTALS
3” OD TSI Pipe Run	L.F.		644	40	6724			40		7448
3” OD TSI Pipe Fittings	Ea.		50		3585			15		3650
TSI 4” Pipe Run	L.F.		30		224					254
TSI 4” Pipe Fittings	Ea.		37		100					137
TSI 5” Pipe Run	L.F.		968	40	4740			80		5784
TSI 5” Pipe Fittings	Ea.		50		460			20		530
TSI 6” Pipe Run	L.F.		40	60			20			120
TSI 6” Pipe Fittings	Ea.			8			2			10
TSI Mastic	L.F.								20	20

Material Description	UNITS	Area Descriptions								
		VALVE PIT AND UNDERGROUND								TOTALS
12” OD TSI Pipe Run, STEAM AND CONDE-NSATE	L.F.	360								360
TSI MASTIC ON FOAM-GLASS JOINTS AND ENDS, 3” WIDE	L. F.	730								730

TABLE 3
MATERIAL CHARACTERIZATION AND ASSESSMENT
HUNTER ARMY AIRFIELD, BUILDING 1275

MATERIAL		CHARACTERISTICS			ASSESSMENT	
Type	**Description**	**Asbestos Yes/No/Assumed**	**Quantity (If ACM)**	**Friable / Non-friable**	**Condition**	**Disturbance Potential**
TSI	3” OD TSI Pipe Run	Yes 10-20%	7448 L.F.	Friable	Damaged	Moderate
TSI	3” OD TSI Pipe Fittings	Assumed	3650 Ea.	Friable	Damaged	Moderate
TSI	4” OD TSI Pipe Run	Yes 10-20%	254 L.F.	Friable	Damaged	Moderate
TSI	4” OD TSI Pipe Fittings	Assumed	137 Ea.	Friable	Damaged	Moderate
TSI	5” OD TSI Pipe Run	Yes 10-20%	5784 L.F.	Friable	Damaged	Moderate
TSI	5” OD TSI Pipe Fittings	Assumed	530 Ea.	Friable	Damaged	Moderate
TSI	6” OD TSI Pipe Run	Assumed	120 L.F.	Friable	Damaged	Moderate
TSI	6” OD TSI Pipe Fittings	Assumed	10 Ea.	Friable	Damaged	Moderate
TSI	Mastic on Refrig. Pipe	Yes 10%	20 L.F.	Non-friable	Good	Low
TSI	12” OD TSI Pipe Run and Fittings	Assumed	360 L.F.	Friable	Significantly Damaged	
TSI	3” Wide Mastic	Assumed	730	Non-friable	Good	

Miscellaneous	Gaskets	Assumed	100 Ea.	Non-friable	Good	Low
Miscellaneous	Caulking Material	Yes 5%	125 L.F.	Non-friable	Damaged	Moderate
Miscellaneous	Window Glazing	Yes 5%	250 L.F.	Friable	Significantly damaged	High
Miscellaneous	Floor Tile & Mastic	Yes 2-4%	69,736 S.F.	Non-friable	Damaged	Moderate
Miscellaneous	Floor Joint Sealer	Yes 20%	1,408 S.F.	Non-friable	Good	Low
Miscellaneous	Fire Rated Doors	Assumed	118 Ea.	?	Good	Low
Surfacing	Silver (Cool Seal) Coating	Yes 25%	600 S.F.	Non-friable	Good	Low

S.F. = Square Foot, L.F. = Linear Foot, C.F. = Cubic Foot

Figure 1

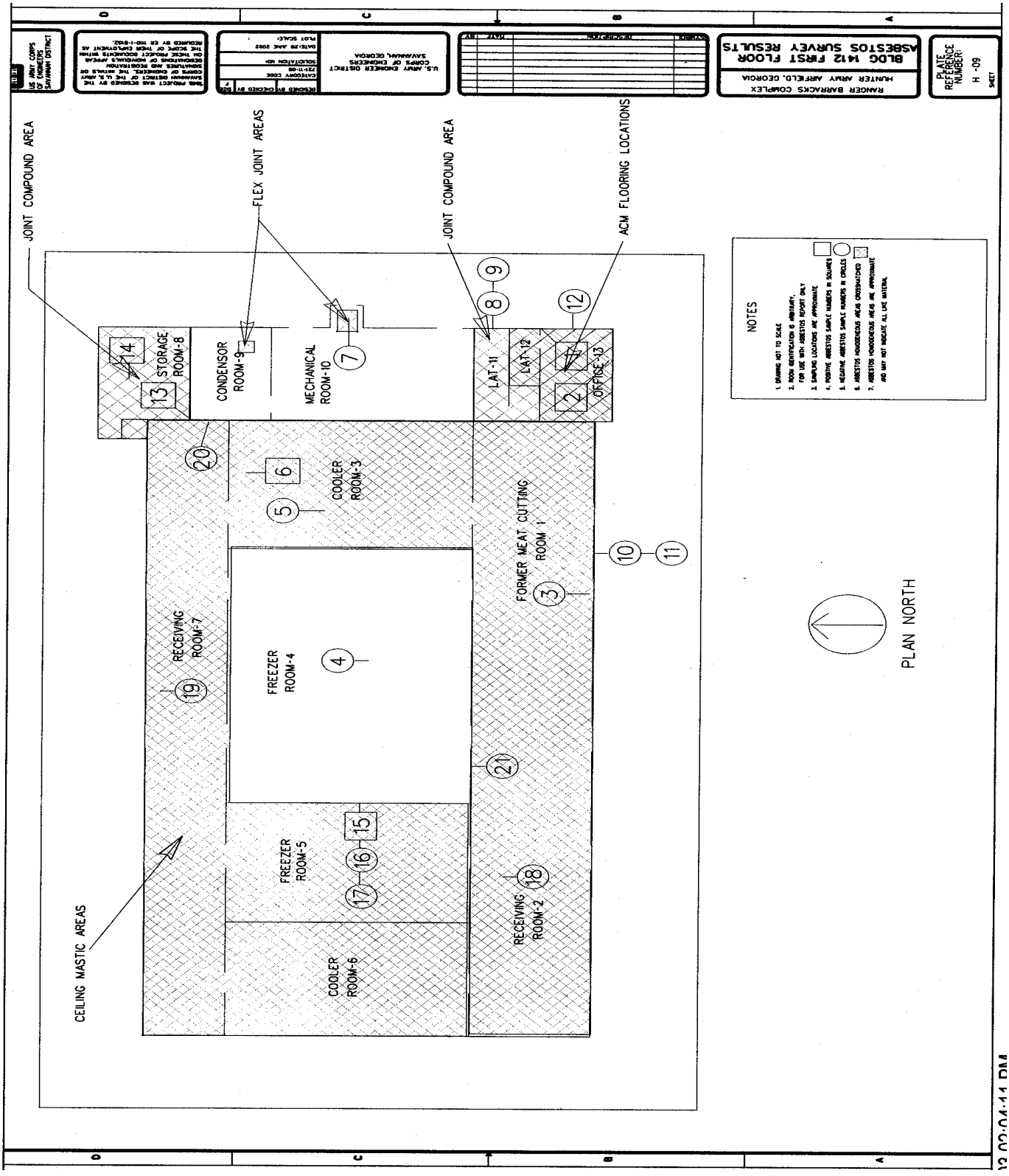

RANGER BARRACKS COMPLEX
HUNTER ARMY AIRFIELD, GEORGIA
BLDG 1412 FIRST FLOOR
ASBESTOS SURVEY RESULTS
PLATE REFERENCE NUMBER: H -09
JOINT COMPOUND AREA
FLEX JOINT AREAS
JOINT COMPOUND AREA
ACM FLOORING LOCATIONS
CEILING MASTIC AREAS
STORAGE ROOM-8
CONDENSOR ROOM-9
MECHANICAL ROOM-10
LAT-11
LAT-12
OFFICE-13
COOLER ROOM-3
FORMER MEAT CUTTING ROOM 1
FREEZER ROOM-4
RECEIVING ROOM-7
FREEZER ROOM-5
COOLER ROOM-6
RECEIVING ROOM-2
NOTES
PLAN NORTH

Figure 2

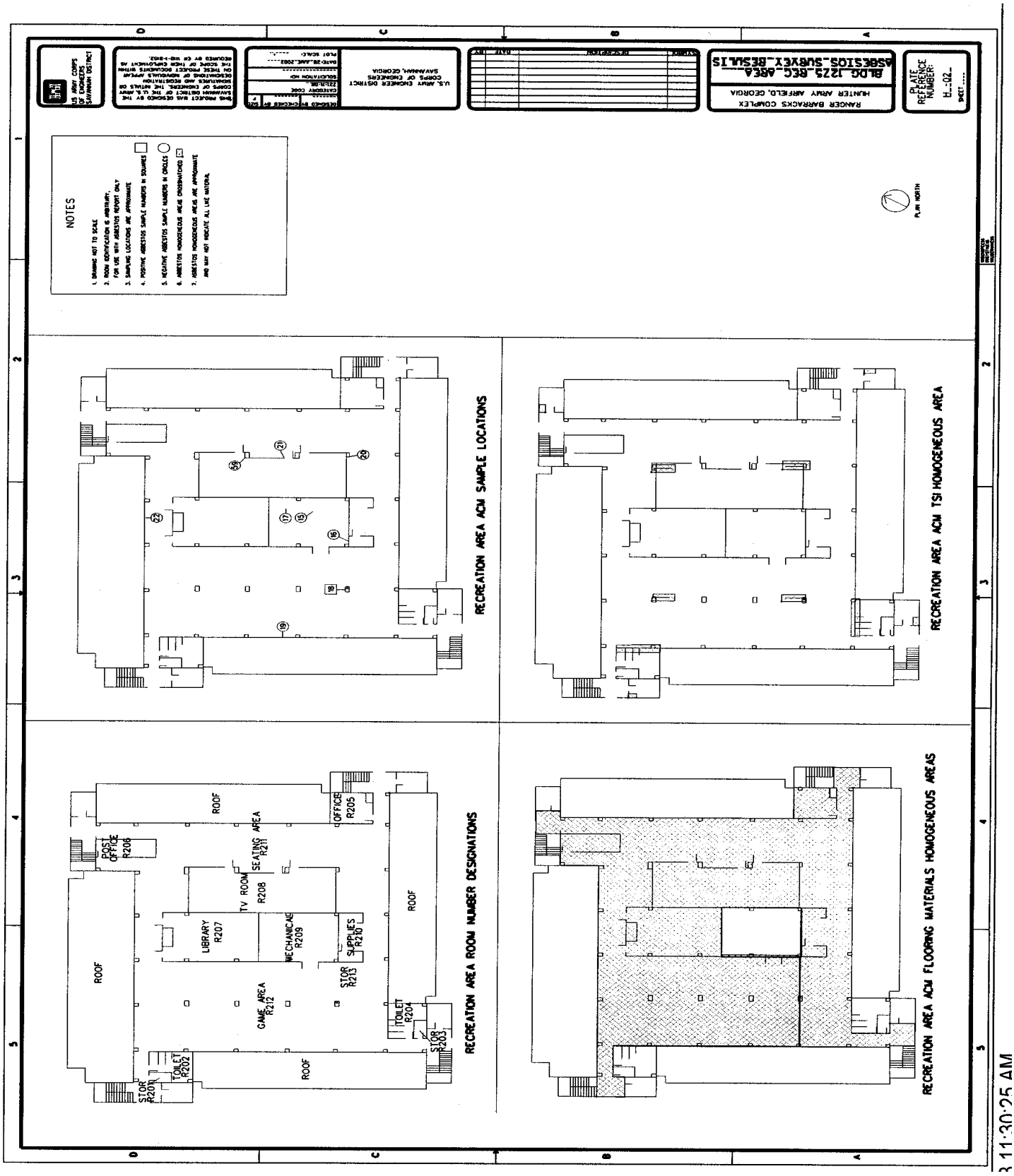

NOTES
RECREATION AREA ACM SAMPLE LOCATIONS
RECREATION AREA ACM TSI HOMOGENEOUS AREA
RECREATION AREA ROOM NUMBER DESIGNATIONS
RECREATION AREA ACM FLOORING MATERIALS HOMOGENEOUS AREAS
ROOF
OFFICE R205
POST OFFICE R206
SEATING AREA R211
TV ROOM R208
LIBRARY R207
MECHANICAL R209
SUPPLIES R210
STOR R213
GAME AREA R212
TOILET R204
STOR R203
TOILET R202
STOR R201

Figure 3

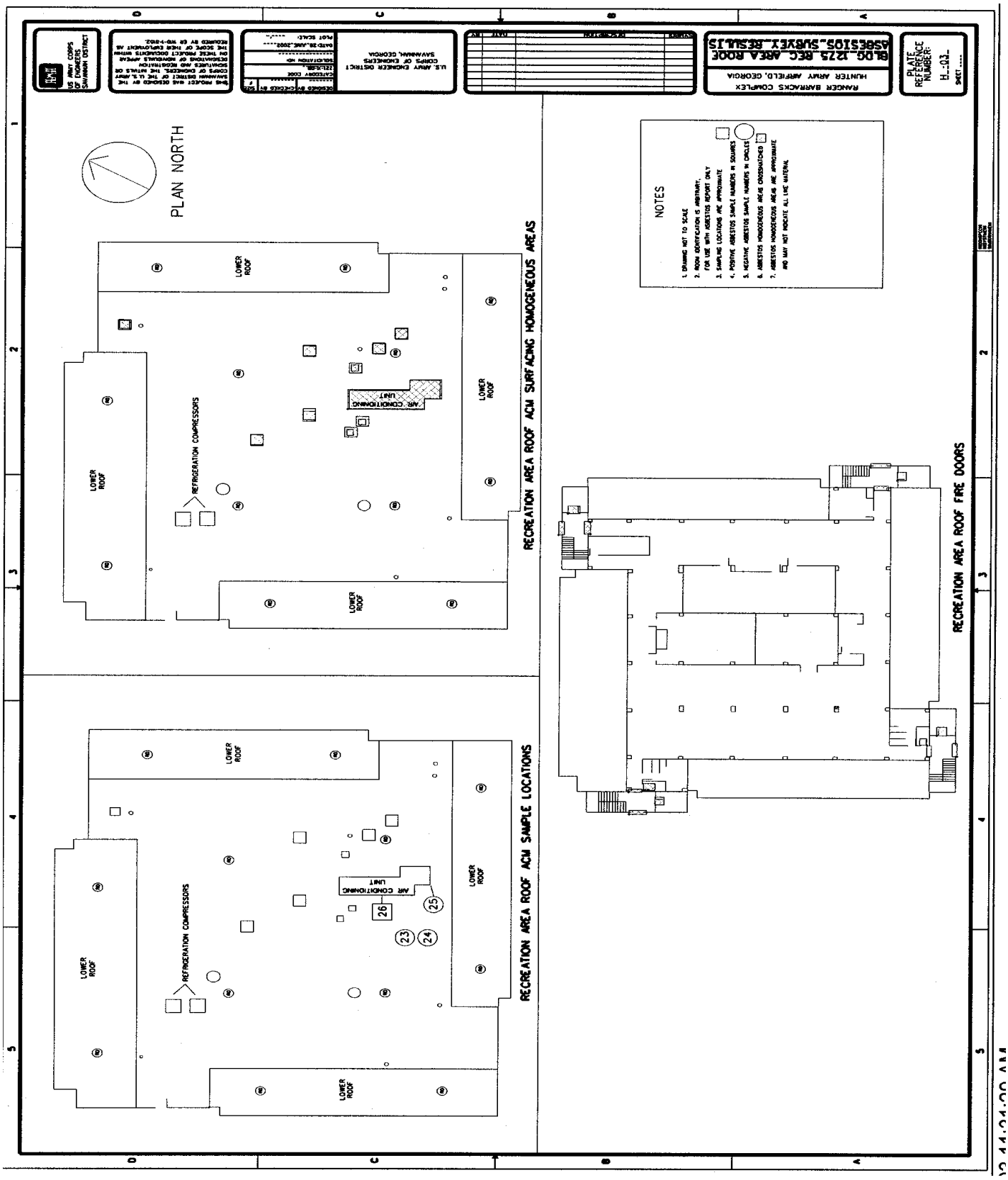
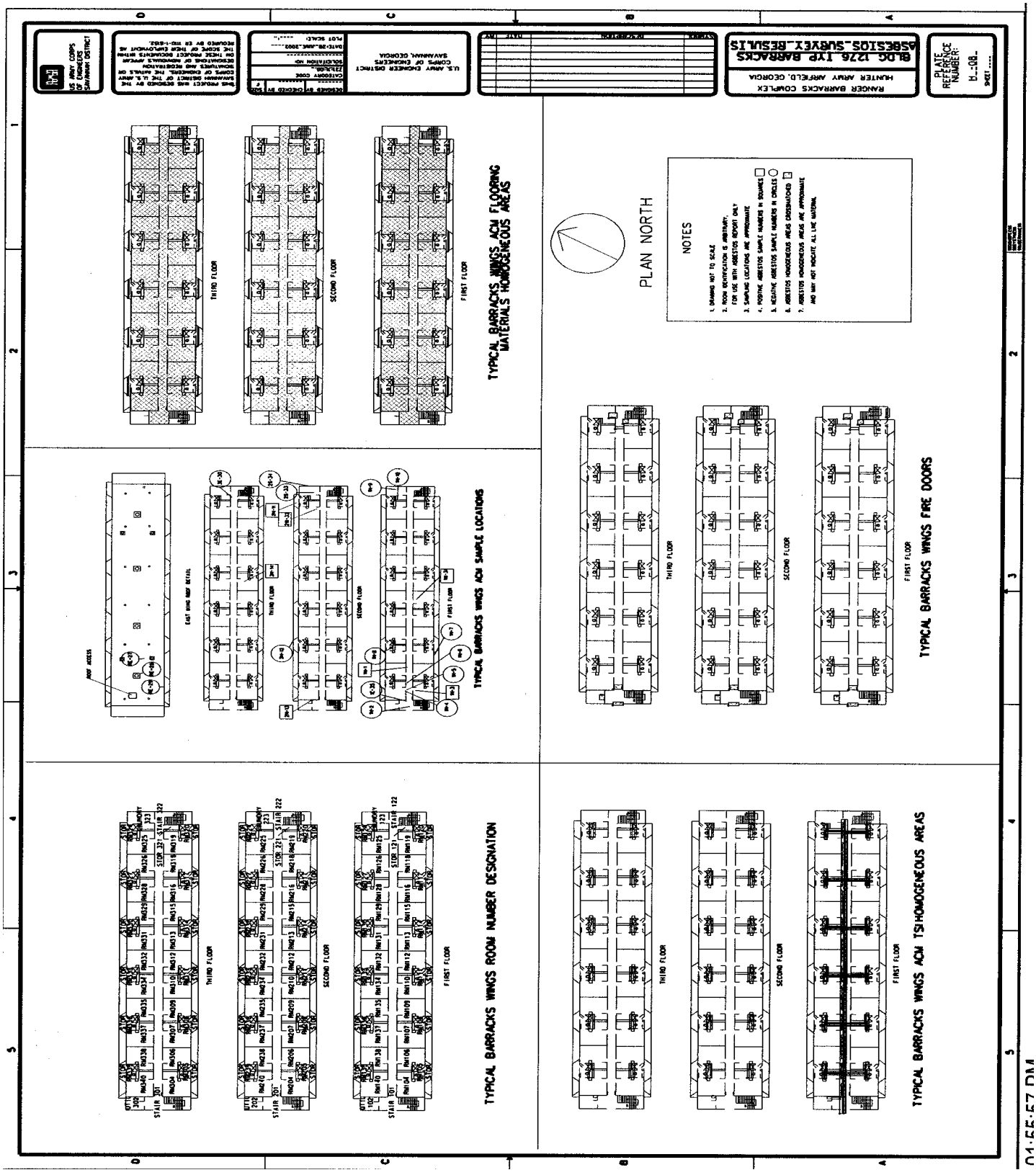

PLAN NORTH
NOTES
1. DRAWING NOT TO SCALE
2. ROOM IDENTIFICATION IS ARBITRARY.
FOR USE WITH ASBESTOS REPORT ONLY
3. SAMPLING LOCATIONS ARE APPROXIMATE
4. POSITIVE ASBESTOS SAMPLE NUMBERS IN SQUARES
5. NEGATIVE ASBESTOS SAMPLE NUMBERS IN CIRCLES
6. ASBESTOS HOMOGENEOUS AREAS CROSSHATCHED
7. ASBESTOS HOMOGENEOUS AREAS ARE APPROXIMATE
AND MAY NOT INDICATE ALL ACM MATERIAL
RECREATION AREA ROOF ACM SURFACING HOMOGENEOUS AREAS
RECREATION AREA ROOF ACM SAMPLE LOCATIONS
RECREATION AREA ROOF FIRE DOORS
LOWER ROOF
AIR CONDITIONING UNIT
REFRIGERATION COMPRESSORS
RANGER BARRACKS COMPLEX
HUNTER army AIRFIELD, GEORGIA
BLDG. 1275 REC. AREA ROOF
ASBESTOS SURVEY RESULTS
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA
US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

Figure 4


RANGER BARRACKS COMPLEX
HUNTER ARMY AIRFIELD, GEORGIA
BLDG 1276 TYP BARRACKS
ASBESTOS SURVEY RESULTS
PLATE REFERENCE NUMBER:
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA
US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT
PLAN NORTH
NOTES
TYPICAL BARRACKS WINGS ACM FLOORING MATERIALS HOMOGENEOUS AREAS
TYPICAL BARRACKS WINGS ACM SAMPLE LOCATIONS
TYPICAL BARRACKS WINGS FIRE DOORS
TYPICAL BARRACKS WINGS ROOM NUMBER DESIGNATION
TYPICAL BARRACKS WINGS ACM TSI HOMOGENEOUS AREAS
THIRD FLOOR
SECOND FLOOR
FIRST FLOOR

Appendix A

Analytical Report - Hygeia Laboratories, Inc.

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

US Army Corp of Engineers
Environmental & Materials Unit
200 North Cobb Parkway
Bldg. 400, Ste. 404
Marietta, GA 30062

11/13/2002

Subject:

Hygeia Project Number: A0211003
Client Project Number/Name: 7650 /Hunter AAF Bldg 1275

Dear Mr. Tim Jones:

Enclosed are the analytical results of bulk samples submitted by you to this laboratory on 10/25/2002. All analyses were performed by polarized light microscopy (PLM) in accordance with the EPA method as defined in Perkins and Harvey, July 1993, "Methods for the Determination of Asbestos in Bulk Materials" 61pp. (EPA/600/R-93/116). The reported percentages are volume estimates obtained by calibrated visual estimation. The results in this report apply only to the items tested.

The EPA defines an asbestos containing material (ACM) as a material that is reported to contain greater than one percent asbestos. HYGEIA is only responsible for the accuracy of the analytical results provided in this report and cannot be held responsible for the errors resulting from improper sample collection techniques. This report may not be used to claim product endorsement by NVLAP or any other U.S. Government agency.

For nonhomogeneous samples, each layer was analyzed separately and the results combined to form the reported value except where otherwise noted. Vinyl floor tile samples with negative results by PLM should be submitted for confirmation by transmission electron microscopy (TEM). Friable samples containing less than 10% asbestos as determined by PLM may be resubmitted for point counting at your discretion.

Thank you for using our analytical services. HYGEIA Laboratories has been NVLAP accredited since 1988. Our current NVLAP code is 102087-0. We will keep a copy of this report on file for three years. We will dispose of your samples in 60 days unless you request that we return them. This report my be reproduced only in its entirety with the consent of Hygeia Laboratories, Inc. If you have any questions, please call us at (770) - 514-6933.

Sincerely,

Clayton Call
Asbestos Laboratory Manager

NVLAP# 102087-0
Texas Dept. of Health # 30-0232
Commonwealth of Virginia # 3333-000210

Hygeia Laboratories Inc.
1300 Williams Drive, Suite A
Marietta, GA 30066
(770) 514-6933

PLM Analysis Summary

Hygeia Project Number: A0211003

Client Project Number/Name: 7650 / Hunter AAF Bldg 1275

Analyzed: 10/29/2002 by JC

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1N-1	A0211003-01	Tan	Cons.	No	<1%								100%	

Comment: **Tile: NAD. Mastic: 2% Chrysotile. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1N-2	A0211003-02	Tan	Cons.	No									100%	

Comment: **Tile: NAD. Mastic: NAD. No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1N-3	A0211003-03	Tan	Cons.	No	3%								97%	

Comment: **Tile: 3% Chrysotile. Mastic: 2% Chrysotile. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1N-4	A0211003-04	White	Fibrous	No						40%	20%		40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1N-5	A0211003-05	White	Fibrous	No						40%	20%		40%	

Comment: **No Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1N-6	A0211003-06	White	Fibrous	No						40%	20%		40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1N-7	A0211003-07	White	Flaky	No						10%			90%	

Comment: **Joint Compound: NAD. Rest: NAD. No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1N-8	A0211003-08	White	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1N-9	A0211003-09	White	Gummy	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1N-10	A0211003-10	White	Flaky	No						10%			90%	

Comment: **Joint Compound: NAD. Rest: NAD. No Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2N-11	A0211003-11	Black	Gummy	Yes	20%								80%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2N-12	A0211003-12	White	Flaky	No						10%			90%	

Comment: **Joint Compound: NAD. Rest: NAD. No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2N-13	A0211003-13	Gray	Fibrous	No	10%					20%	5%		65%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-3N-14	A0211003-14	Tan	Cons.	No	2%								98%	

Comment: **Tile: 2% Chrysotile. Mastic: 3% Chrysotile. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2RAM-15	A0211003-15	Black	Gummy	Yes									100%	

Comment: **No Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2RAM-16	A0211003-16	White	Flaky	No						10%			90%	

Comment: Joint Compound: NAD. Rest: NAD. No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2RAM-17	A0211003-17	Black	Gummy	No							40%		60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2RA-18	A0211003-18	Tan	Cons.	No	2%								98%	

Comment: Tile: 2% Chrysotile. Mastic: 4% Chrysotile. Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2RA-19	A0211003-19	White	Flaky	No						10%			90%	

Comment: Joint Compound: NAD. Rest: NAD. No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2RA-20	A0211003-20	White	Flaky	No						10%			90%	

Comment: Joint Compound: NAD. Rest: NAD. No Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2RA-21	A0211003-21	Blue	Cons.	No									100%	

Comment: Tile: NAD. Mastic: NAD. No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2RA-22	A0211003-22	White	Flaky	No						10%			90%	

Comment: Joint Compound: NAD. Rest: NAD. No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-RAR-23	A0211003-23	Black	Fibrous	No							30%		70%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-RAR-24	A0211003-24	Tan	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-RAR-25	A0211003-25	Black	Gummy	No						15%			85%	

Comment: No Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-RAR-26	A0211003-26	Silver	Layered	No	2%						8%		90%	

Comment: **Silver layer: 25% Chrysotile. Rest: NAD. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-RE-27	A0211003-27	Black	Layered	No						20%			80%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-RE-28	A0211003-28	Gray	Gummy	No						5%			90%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-RE-29	A0211003-29	Black	Fibrous	No						10%	20%		70%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-3E-30	A0211003-30	Gray	Powdery	N/A							30%		70%	

Comment: **No Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1W-31	A0211003-31	White	Cons.	No	<1%								100%	

Comment: Tile: NAD. Mastic: 4% Chrysotile. Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2W-32	A0211003-32	Tan	Cons.	No	3%								97%	

Comment: Tile: 3% Chrysotile. Mastic: 4% Chrysotile. Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2S-33	A0211003-33	Tan	Flaky	No									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-2S-34	A0211003-34	White	Flaky	No									100%	

Comment: Joint Compound: NAD. Rest: NAD. No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1E-35PV	A0211003-35	Gray	Powdery	Yes							35%		65%	

Comment: Bag Labeled as "1275-1E-PV" No Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-E-36PR	A0211003-36	Tan	Fibrous	No	20%					20%	10%		50%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-E-37PR	A0211003-37	Tan	Fibrous	No	10%					30%			60%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-E-38PR	A0211003-38	Tan	Fibrous	No	10%					30%			60%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-EX-39	A0211003-39	Tan	Cons.	Yes	5%								95%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-EX-40	A0211003-40	Tan	Cons.	Yes	5%								95%	

Comment: **Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-EX-41	A0211003-41	Gray	Fibrous	Yes							40%		60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-42	A0211003-42	Brown	Rubbery	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-43	A0211003-43	Black	Gummy	No	10%								90%	

Comment: Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-44	A0211003-44	Gray	Fibrous	Yes						30%	10%		50%	10%

Comment: Other Non-Fibers: Perlite. No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-45	A0211003-45	Gray	Fibrous	Yes						30%	10%		50%	10%

Comment: Other Non-Fibers: Perlite. No Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-46	A0211003-46	Brown	Cons.	No									100%	

Comment: Tile & Black Mastic: NAD. No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-47	A0211003-47	Gray	Powdery	No						30%			70%	

Comment: Joint Mud: NAD. Rest: NAD. No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-48	A0211003-48	Gray	Plastery	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-49PR	A0211003-49	Gray	Fibrous	Yes	12%					38%			50%	

Comment: Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-50PR	A0211003-50	Gray	Fibrous	Yes	10%					20%			70%	

Comment: Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-51	A0211003-51	Gray	Powdery	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-52	A0211003-52	Brown	Cons.	No	<1%								100%	

Comment: Tile:NAD. Black Mastic: <1% Chrysotile. Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-53	A0211003-53	Tan	Fibrous	No						20%		10%	70%	

Comment: Other Fibers: Synthetic Fibers. Lineoleum & Mastic: NAD. No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-54	A0211003-54	Tan	Cons.	No	3%								97%	

Comment: Tile: 3% Chrysotile. Mastic: 2% Chrysotile. Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-55	A0211003-55	Tan	Cons.	No									100%	

Comment: Tile & Mastic: NAD. No Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-56	A0211003-56	Tan	Cons.	No									100%	

Comment: **Tile & Mastic: NAD. No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-1-57	A0211003-57	Black	Fibrous	No						60%			40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-EX-58	A0211003-58	Black	Fibrous	Yes						70%			30%	

Comment: **Not on Chain of Custody. No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1275-RA-59	A0211003-59	White	Flaky	No						10%			90%	

Comment: **Not on Chain of Custody. Joint Compound: NAD. Rest: NAD. No Asbestos Detected.**

abbreviations:

Chr. = chrysotile
Am. = amosite
Cro. = crocidolite
An. = anthophyllite
T/A = tremolite/actinolite

cell = cellulose
glass = fibrous glass
syn = synthetic
sty = styrene foam
det = detected

per = perlite
ver = vermiculite
MF = Mineral filler
B/F = Binder / filler
NAD = No asbestos detected

OF = Other Fibers
ONF = Other Non-Fibers
Cons = Consolidated

Appendix B

Sample Chain of Custody Forms

A0211003

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project:	**Hunter AAF Bldg 1275**	Job No.:	**7650**
Sampler:	Tim Jones	Analysis:	PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
10/21/2002	1275-1N-1	44836	Floor tile
10/21/2002	1275-1N-2	44837	Floor tile
10/21/2002	1275-1N-3	44838	Floor tile
10/21/2002	1275-1N-4	44839	Ceiling tile
10/21/2002	1275-1N-5	44840	Ceiling tile
10/21/2002	1275-1N-6	44841	Ceiling tile
10/21/2002	1275-1N-7	44842	Drywall joint compound
10/21/2002	1275-1N-8	44843	Plaster
10/21/2002	1275-1N-9	44844	"Popcorn" ceiling surfacing
10/21/2002	1275-1N-10	44845	Drywall joint compound
10/21/2002	1275-2N-11	44846	Floor joint sealer
10/21/2002	1275-2N-12	44847	Drywall joint compound
10/21/2002	1275-2N-13	44848	TSI
10/21/2002	1275-3N-14	44849	Floor tile
10/21/2002	1275-2RAM-15	44850	Floor joint sealer
10/21/2002	1275-2RAM-16	44851	Drywall joint compound
10/21/2002	1275-2RAM-17	44852	Ductwork flex joint
10/21/2002	1275-2RA-18	44853	Floor tile
10/21/2002	1275-2RA-19	44854	Drywall joint compound
10/21/2002	1275-2RA-20	44855	Drywall joint compound
10/21/2002	1275-2RA-21	44856	Floor tile
10/21/2002	1275-2RA-22	44857	Drywall joint compound

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	10-25-02	1425	[signature]	10/25/02	15:00

Comments: Fax results to Tim Jones @ 678-354-0330

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project:	**Hunter AAF Bldg 1275**	Job No.:	**7650**
Sampler:	Tim Jones	Analysis:	PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
10/21/2002	1275-RAR-23	44858	Built up roofing
10/21/2002	1275-RAR-24	44859	Light weight concrete
10/21/2002	1275-RAR-25	44860	Roof flashing
10/21/2002	1275-RAR-26	44861	"Cool seal" surfacing
10/21/2002	1275-RE-27	44862	Built up roofing
10/21/2002	1275-RE-28	44863	Roofing cement
10/21/2002	1275-RE-29	44864	Roof flashing
10/21/2002	1275-3E-30	44865	Fire wall sealer
10/21/2002	1275-1W-31	44866	Floor tile
10/21/2002	1275-2W-32	44867	Floor tile
10/21/2002	1275-2S-33	44868	"Popcorn" ceiling surfacing
10/21/2002	1275-2S-34	44869	Drywall joint compound
10/21/2002	1275-1E-35PV	44870	TSI molded fitting
10/21/2002	1275-E-36PR	44871	TSI pipe run
10/21/2002	1275-E-37PR	44872	TSI pipe run
10/21/2002	1275-E-38PR	44873	TSI pipe run
10/21/2002	1275-EX-39	44874	Window glazing compound
10/21/2002	1275-EX-40	44875	Window frame caulking
10/21/2002	1275-EX-41	44876	TSI pipe jacket
10/22/2002	1275-1-42	44877	Wall insulation
10/22/2002	1275-1-43	44878	TSI pipe jacket
10/22/2002	1275-1-44	44879	Ceiling tile

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	10-25-02	1425		10/25/02	15:00

Comments: Fax results to Tim Jones @ 678-354-0330

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project:	**Hunter AAF Bldg 1275**	Job No.:	**7650**
Sampler:	Tim Jones	Analysis:	PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
10/21/2002	1275-1-45	44880	Ceiling tile
10/21/2002	1275-1-46	44881	Floor tile
10/21/2002	1275-1-47	44882	Drywall joint compound
10/21/2002	1275-1-48	44883	Plaster
10/21/2002	1275-1-49PR	44884	TSI pipe run
10/21/2002	1275-1-50PR	44885	TSI pipe run
10/21/2002	1275-1-51	44886	Plaster/drywall mud?
10/21/2002	1275-1-52	44887	Floor tile
10/21/2002	1275-1-53	44888	Sheet vinyl flooring
10/21/2002	1275-1-54	44889	Floor tile
10/21/2002	1275-1-55	44890	Floor tile
10/21/2002	1275-1-56	44891	Floor tile
10/21/2002	1275-1-57	44892	Felt paper

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	10-25-02	1425	[signature]	10/25/02	15:06

Comments: Fax results to Tim Jones @ 678-354-0330

Appendix C

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed

an examination that meets all criteria required for

EPA / AHERA (TSCA Title II) Approved Accreditation

and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997
Course Date

2360
Certificate Number

February 12, 1997
Examination Date

February 11, 1998
Expiration Date

William H. Spain - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

7283
Certificate Number

February 26, 2002
Examination Date

February 25, 2003
Expiration Date

Thomas G. Laubenthal - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

HYGEIA LABORATORIES, INC.

MARIETTA, GA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 2003

Effective through

David F. Alderman

For the National Institute of Standards and Technology

NVLAP Lab Code: 102087-0

NVLAP-01C (11-95)

National Institute of Standards and Technology

NVLAP®

National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation

BULK ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 102087-0**

HYGEIA LABORATORIES, INC.
1300 Williams Drive, Suite A
Marietta, GA 30066-6299
Mr. Clayton Call
Phone: 770-514-6933 Fax: 770-514-6966
E-Mail: call67@atc-enviro.com

NVLAP Code	*Designation*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

March 31, 2003

Effective through

David F. Alderman

For the National Institute of Standards and Technology

NVLAP-01S (11-95)

Savannah District
Environmental and Materials Unit

US Army Corps of Engineers®

Hazardous Building Materials Survey

Building No. 1275 Hunter Army Air Field, Georgia

Prepared by Timothy A. Jones

Building 1275, Hunter Army Air Field, GA

by Timothy A. Jones

Final Report

Prepared for **US Army Corps of Engineers**
Savannah District

Hazardous Building Materials Survey Report

Introduction

Background

Building No. 1275 is a 1950s vintage three-story structural concrete and masonry frame structure with multi-layered built-up asphalt and felt roof systems over structural concrete. The floor systems are structural concrete covered generally with vinyl tile. The exterior of the building has been renovated at some time and covered with a stucco material over expandable polystyrene and cloth mesh, effectively hiding the original exterior structure and hindering inspection of that original finish. The building is divided into five main sections. The center section is two stories with the first incorporating a kitchen and dining facility and the second story divided between recreational areas, storage areas, Post Office, offices, two restrooms and a mechanical room. The four remaining sections are identical three story barracks wings. The barracks rooms are laid out such that generally two sleeping quarters share one bathroom and storage room, with the exception that the two outer end sleeping rooms do not share restrooms. Each floor has a separate janitor's closet, laundry room and storage room. The uppermost floor's storage room contains an access opening to the roof of that particular wing. The roofs of the four wings are identical in appearance. Rooms on the building floor plans are arbitrarily numbered for identification in this report only as indicated on Figure 1.

Description of study

Investigation

This report documents the hazardous building materials survey of Building No. 1275 at Hunter Army Air Field, Georgia conducted on 17 October 2002 by USACE Savannah District employees Tim Jones and Mike Ruth. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District, which includes the USAEHA guidance for demolition debris characterization by TCLP sampling.

Conclusions

The following information gathered during the survey of Building 1275 is presented in attached information:

a. *Light Count:* The fluorescent and mercury vapor light count results are presented in Table 1.

b. *Lead Building Materials:* Inspection of the building revealed lead in the plumbing drainage and vent piping system used as pipe joints. Lead flashings are used at the pipe penetrations through the roof. Details are outlined in Table 2.

c. *T*CLP *Lead Results:* Sampling of building components was performed as required and components were processed and mixed in the proper percentages and given a sample identification of HAAF B 1275 TCLP. TCLP analysis by Hygeia Laboratories indicates that lead is not present above Hygeia's reporting limit of 0.5 mg/L, and therefore is below the regulatory limit of 5 mg/L for landfill disposal. Field sampling data including component type, color, TCLP mix percentage and approximate sampling location is presented in Table 3. A scanned copy of Hygeia's analytical report is included as Appendix A.

d. *Thermostats:* Two hundred and seventy-six mercury-containing thermostats were located in Building 1275, one in each barracks sleeping room and one in each laundry room.

e. *Smoke Detectors:* Three hundred and twenty-four smoke detectors were located in building 1275, one in each barracks sleeping room and five in each barracks wing corridor.

f. *Transformers:* One large pad mounted transformer was located on the exterior of the building near Mechanical Room D121.

g. *Compressed Refrigerant Gas:* Seven window air-conditioning units were located in Building 1275; five in the barracks wings and two in the recreation area. Two rooftop refrigeration/AC units were located on the Recreation Area roof, possibly associated with kitchen equipment. Three refrigeration units were located near the rear entrance of the kitchen associated with the walk in coolers. Twelve drinking fountains were located in Building 1275, one on each floor of the barracks wings. All of these units are assumed to contain refrigerant gas that should be recovered prior to demolition.

h. *Above and Underground Storage Tanks:* None of either were located associated with Building 1275.

i. *Built-in Fire suppression System:* A built-in fire suppression system for the stove hoods was located containing the suppressant “Karbaloy”. A copy of the MSDS sheet for this suppressant can be viewed on the web at Http://www.brooksequipment.com/MSDS/131.pdf

List of Tables

List of Figures

Appendix

Tables

TABLE 1
HUNTER ARMY AIR FIELD BUILDING 1275
FLUORESCENT AND MERCURY LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	12	2 bulb, 2 foot square fluorescent fixtures
Interior	48	1 bulb, 4 foot fluorescent fixtures
Interior	675	2 bulb, 4 foot fluorescent fixtures
Interior	28	Exit Lights
Interior	76	Battery backup emergency lights

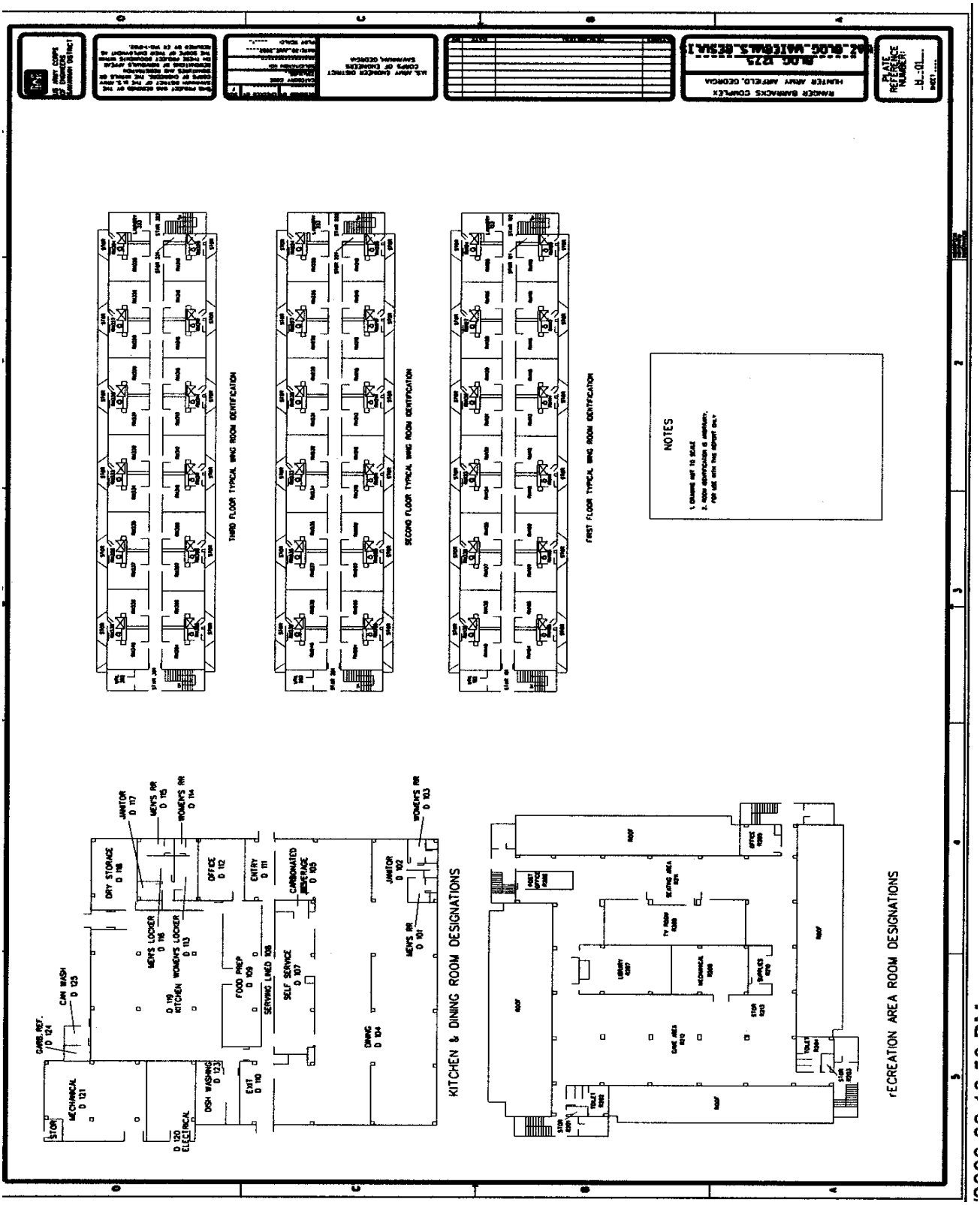
TABLE 2
HUNTER ARMY AIR FIELD BUILDING 1275
LEAD BUILDING COMPONENTS

BUILDING COMPONENT	DESCRIPTION	LOCATION	ESTIMATED NUMBER
Hot poured lead pipe joint	In plumbing drainage, waste and vent piping	Under slab and in plumbing chase walls	3000-4000
Lead Pipe Flashings	Roof flashing	Roof	60

TABLE 3
HUNTER ARMY AIR FIELD BUILDING 1275
TCLP COMPOSITE SAMPLE COMPONENTS

BUILDING COMPONENT	DESCRIPTION	LOCATION	PERCENTAGE OF SAMPLE
Unpainted Wood	Wall framing	Mechanical Room	26%
Interior wall covering	White painted drywall	North wing, 2nd floor, laundry room	23%
Roofing Components	Built-up roofing membrane	Recreation Area roof	7%
Interior Floor Coverings	Floor tile	North wing, 1st floor, corridor	10%
Block, Brick, Concrete	Tan painted block	East wing, 1st floor stairwell wall	25%
Ceiling Material	White ceiling tile	Recreation Area, 2nd floor	7%
Painted Wood-Interior	Brown base molding	Recreation Area, 2nd floor	1%
Painted Wood-Exterior	Tan stucco substituted, no exterior wood present	Exterior, near mechanical room	1%

Figure 1


THIRD FLOOR TYPICAL WING ROOM IDENTIFICATION
SECOND FLOOR TYPICAL WING ROOM IDENTIFICATION
FIRST FLOOR TYPICAL WING ROOM IDENTIFICATION
NOTES
KITCHEN & DINING ROOM DESIGNATIONS
rECREATION AREA ROOM DESIGNATIONS

Appendix A

Analytical Report – Hygeia Laboratories, Inc

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

Lab Project No. M0210286 Report Date: 11/01/02

Client Name: **US Army Corp of Engineers - Atlanta**
Contact: **Tim Jones**
Address: Environmental & Materials Unit
200 North Cobb Parkway
Bldg. 400, Ste. 404
Marietta, GA 30062
Project Name: **Hunter AAF Ranger Barracks Complex**
Project ID: 7651
Receipt Date: 10/25/2002

Case Narrative

1. The sample holding times were met for all analyses.
2. Where applicable, results & reporting limits are based on wet weight; dry weight calculations available.
3. The temperature of the sample cooler as received by the laboratory was room temperature.
4. Hygeia Labs assumes a sampling time of 12:00 PM unless otherwise specified on the Chain of Custody.

Reviewed By: AWS

Respectively Submitted:
Hygeia Laboratories, Inc.

Sample Identification

Lab Sample #	Client Sample ID	Sample Supply	Collected
M0210286-01	HAAF B 1275 TCLP	Bulk	10/25/02
M0210286-02	HAAF B 1276 TCLP	Bulk	10/25/02
M0210286-03	HAAF B 1412 TCLP	Bulk	10/25/02
M0210286-04	HAAF B 1413 TCLP	Bulk	10/25/02

TCLP Metals By ICP	Units: mg/L (ppm)	Method #: EPA_1311/6010B
Matrix: Leachate	Analysis Date: 10/31/2002	Prep Date: 10/29/2002 Analyst: SR
Lab Sample #: **M0210286-01**	Client ID: **HAAF B 1275 TCLP**	

Analyte(s)	CAS #	Result	Report Limit	Flag Code
Lead	7439-92-1	BRL	0.5	

TCLP Metals By ICP	Units: mg/L (ppm)	Method #: EPA_1311/6010B
Matrix: Leachate	Analysis Date: 10/31/2002	Prep Date: 10/29/2002 Analyst: SR
Lab Sample #: **M0210286-02**	Client ID: **HAAF B 1276 TCLP**	

Analyte(s)	CAS #	Result	Report Limit	Flag Code
Lead	7439-92-1	BRL	0.5	

TCLP Metals By ICP	Units: mg/L (ppm)	Method #: EPA_1311/6010B
Matrix: Leachate	Analysis Date: 10/31/2002	Prep Date: 10/29/2002 Analyst: SR
Lab Sample #: **M0210286-03**	Client ID: **HAAF B 1412 TCLP**	

Analyte(s)	CAS #	Result	Report Limit	Flag Code
Lead	7439-92-1	BRL	0.5	

TCLP Metals By ICP	Units: mg/L (ppm)	Method #: EPA_1311/6010B
Matrix: Leachate	Analysis Date: 10/31/2002	Prep Date: 10/29/2002 Analyst: SR
Lab Sample #: **M0210286-04**	Client ID: **HAAF B 1413 TCLP**	

Analyte(s)	CAS #	Result	Report Limit	Flag Code
Lead	7439-92-1	1.3	0.5	

NOTES:

- Results relate only to the samples tested as received (See Chain-of-Custody).
- BRL = "Below Reporting Limit"
- RL = "Reporting Limit"
- E = "Estimated Result"
- Dates are presented in the format "month/day/year"

Certifications

Alabama - Lab ID 40970; Arkansas; Connecticut - No. PH 0208; Delaware - GA040; Georgia - No. 804; Indiana - Lab ID C-GA-01
Kentucky - Lab ID 90053, UST - No. 0005; Louisiana; Maryland - No. 293; Massachussetts No. M - GA040; North Carolina - No. 409
Rhode Island, License No. 245; South Carolina - No. 98012001; Tennessee - Lab ID 02827; Virginia - Lab ID 00024
South Carolina - No. 98012; Tennessee - Lab ID 02827 (DW), UST Program; Virginia - Lab ID 0024

Accreditations

American Association for Laboratory Accreditation, A2LA - No. 330.01;
American Industrial Hygiene Association, AIHA - Lab ID 100649; NELAC - State of Florida DOH, No. E87257

US Army Corps of Engineers
Savannah District
Environmental & Materials Unit

Chain of Custody Record

M0210286

Project Name: Hunter AAF Ranger Barracks Complex

Job # 7651

TAT 7 days

Date	Time	Pres.	Gr	Cm	Site Code/Sample Number	No. of Containers	TCLP Lead				Lab #	SAD No.	Matrix
10-25-02				✓	HAAF B 1275 TCLP	8	✓				1A	44893	Building Composite
↓				✓	HAAF B 1276 TCLP	8	✓				2A	44894	↓
				✓	HAAF B 1412 TCLP	8	✓				3A	44895	
↓				✓	HAAF B 1413 TCLP	8	✓				4A	44896	
					REPORT IN PPM								
					(NO PERCENT) RW								
													RT, ML

Sampler Relinquisher by: (sig) Tim Jones	Date/Time 10-25-02 1435	Received by: (sig)	Date/Time
Relinquished by: (sig)	Date/Time	Received by: (sig)	Date/Time
Relinquished by: (sig)	Date/Time	Received by: (sig) MWalmsley	Date/Time 10-25-02 9:10

Remarks: Fax Results to Tim Jones 678-354-0330

Savannah District
Environmental and Materials Unit

US Army Corps of Engineers®

Asbestos Survey

Building No. 1276 Hunter Army Air Field, Georgia

Prepared by Timothy A. Jones

Asbestos Survey **January 2003**

Building No. 1276 Hunter Army Air Field, Georgia

bv Timothv A. Jones

Final report

Prepared for **US Army Corps of Engineers**
Savannah District

Asbestos Inspection Report

Introduction

Scope of the Investigation

This report documents the asbestos inspection and survey of Building No.1276 at Hunter Army Air Field; Georgia conducted 21-22 October 2002 by Savannah District US Army Corps of Engineers employees Tim Jones, and Mike Ruth. The survey was conducted in general accordance with the regulatory guidelines in the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763 Subpart E Sections 763.80-763.88) and "Guidance for Controlling Asbestos-Containing Materials in Buildings" (Purple Book) (EPA publication number 560/5-85-024). Although not required by the AHERA guidelines, roof and other exterior miscellaneous materials were also inspected and sampled.

Background

Building No. 1276 is a 1950s vintage three-story structural concrete and masonry frame structure with multi-layered built-up asphalt and felt roof systems over structural concrete. The floor systems are structural concrete covered generally with vinyl tile. The exterior of the building has been renovated at some time and covered with a stucco material over expandable polystyrene and cloth mesh, effectively hiding the original exterior structure and hindering inspection of that original finish. The building is divided into five main sections. The center section is two stories with the first incorporating office/storage space and the second story divided between recreational areas, storage areas, Post Office, offices, two restrooms and a mechanical room. The four remaining sections are identical three story barracks wings. The barracks rooms are laid out such that generally two sleeping quarters share one bathroom and storage room, with the exception that the two outer end sleeping rooms do not share restrooms. Each floor has a separate janitor's closet, laundry room and storage room. The uppermost floor's storage room contains an access opening to the roof of that particular wing. The roofs of the four wings are identical in appearance. Rooms on the building floor plans are arbitrarily numbered for identification in this report only as indicated on Figures 1-3.

Description of study

Investigation

All accessible areas of Building No. 1276 were visually inspected for suspected asbestos containing materials (ACM) by accredited inspectors, with the exception of the identical barracks sleeping rooms which were randomly inspected. Bulk samples of all suspected ACM's were collected. Sample locations are indicated on the floor plan Figures. Individual Figures are presented for the center hub sections of the building. Typical floor plans are presented to represent the four barracks wings and the sample numbers represent the wing and floor numbers as well as the numerical sequential sample number. An example is sample 1276-1N-2 indicates building 1276, first floor North wing, sequential sample number 2. This report details ACM as identified at the time of inspection only.

The bulk samples were analyzed by Hygeia Laboratories, Inc. Hygeia is accredited by the National Voluntary Laboratory Accredited Program (NVLAP Accreditation sponsored by the National Institute of Standards and Technology (NIST)). Copies of their accreditation certificates are included in Appendix C. The samples were analyzed by the accepted method of polarized light microscopy (PLM) using EPA's "Method For the Determination of Asbestos In Bulk Building Materials", EPA/600/R-93/116. Hygeia's analytical report is included in Appendix A.

In compliance with the AHERA regulations, material is considered an Asbestos Containing Material (ACM) when it contains greater than one percent asbestos. Likewise, in this report, any material containing concentrations greater than one percent asbestos will be considered "positive". Occasionally, materials containing less than one percent asbestos are assumed to be a "positive" asbestos containing material at the discretion of the inspectors. A narrative discussion of the AHERA ACM types (i.e., thermal systems insulation, miscellaneous and surfacing materials) found in Building No. 1276 is included in this report where relevant. Bulk sample information appears on Table 1. Estimated quantities of individual asbestos containing materials appear on Table 2. Material characterization of asbestos containing materials appears on Table 3. The specific location where each bulk sample was obtained is shown on the building floor plans, which appear as Figures. Positive ACM samples are highlighted on the floor plan Figures and, where possible, locations of positive ACM are identified. It is reasonable to assume that all materials similar to those testing positive, also contain positive amounts of asbestos and should be treated as such.

Analysis

Thermal Systems Insulation (TSI)

TSI is insulation material applied to pipes, fittings, tanks, ducts, or for other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.

a. *TSI Domestic Water Piping:* The majority of pipe runs of the domestic water system throughout the building, with the exception of the majority of the first floor Mechanical Room A120, contain asbestos. Some TSI debris was noted in the pipe pit within the Mechanical Room A120 and is assumed to contain asbestos. The pipe run TSI material is typically approximately one-inch thick corrugated paper type with layers of friable white asbestos materials within. The molded fittings on the domestic water piping, though testing negative, are assumed to contain asbestos due to their proximity and binding with the pipe run insulation. In some small areas the insulation has been removed or replaced, however for estimation purposes within this report, the insulation is assumed to remain. Plumbing chases in the barracks sleeping area restrooms were inaccessible for inspection and the water piping within is assumed to contain similar asbestos containing insulation. The outer dimensions of this asbestos-containing TSI typically ranges from 3-5 inches. The domestic water piping within the first floor Mechanical Room A120 appears to have been replaced with newer fiberglass TSI -(Refer to Tables 1, 2 and 3 for specific information and Figures for sample locations and homogeneous area locations).

b. *TSI HVAC Water Piping:* The HVAC hot, cold and dual temperature water piping throughout the building is of fiberglass or rubber non-ACM material.

c. *TSI Underground HVAC Piping:* The insulation on the steam and condensate piping within the exterior valve pit and underground from the pit to Building 1276 contains asbestos. This material is white pre-formed block insulation of approximately 12” diameter. The mastic sealer over the joints and ends of the foam-glass insulation on the dual temperature water lines in the exterior valve pit and underground from the pit to Building 1276 contains. Debris from the material may be found in the pit inside Mechanical Room A120 where the steam and condensate piping system enters the building. The valve pits are located to the west of the west barracks wing.-(Refer to Tables 2 and 3 for specific information).

d. *TSI Storm Drainage Piping:* The pipe runs and fittings on much of the storm drainage piping from the roof drains on the interior of the building contain asbestos. This material is typically one to one and a half inch thick, 8”OD white friable material. Molded fitting material tested in Building 1276 was found to be non-asbestos containing, but will be assumed positive due to proximity and

attachment to friable asbestos pipe run material. Some material on the second floor Recreation Area piping appears to be replaced with newer fiberglass material. Material in chases is assumed to be similar asbestos containing insulation. Insulation on all of the exterior storm drain piping appears to have been replaced with fiberglass material. There are three roof drains per typical barracks wing. The piping was not located and must be concealed within chases, however it is assumed that it is covered with asbestos-containing TSI material. -(Refer to Tables 2 and 3 for specific information and Figures for homogeneous area locations).

Miscellaneous Materials

Miscellaneous materials include building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and do not include surfacing or TSI.

In the past, there were a great number of miscellaneous building materials that had asbestos fibers added to them during the manufacturing process to increase durability and fireproofing qualities. The following suspect miscellaneous materials at Building No. 1276 were found to contain or were assumed to contain asbestos:

a. *Floor Tiles And Mastic:* 12" X 12" floor tiles and associated mastic throughout the majority of Building 1276 contain or assumed to contain asbestos. 12" X 12" tan/gray floor tile & mastic, 12" X 12" light gray floor tiles and mastic, and 12" X 12" tan/green floor tiles & mastic all in the first floor administrative areas all contain asbestos. 12" X 12" beige/brown/white typical floor tiles and mastic in the Recreation Area both contain asbestos. 12" X 12" brown/tan/white floor tiles in the corridors of the barracks wings were non-asbestos, however their associated mastic contains asbestos. 12" X 12" beige patterned floor tiles and their associated mastic typical in the barracks sleeping rooms both contain asbestos. Small areas of patch tiles located in several areas were non-asbestos but quantities are insignificant. -(Refer to Tables 1, 2 and 3 for specific information and Figures for sample locations and homogeneous area locations).

b. *Floor Joint Sealer:* Black Floor joint sealer in the many of the Storage Rooms associated with the barracks rooms contains asbestos. This material is typically 12" wide and ¼" thick. -(Refer to Tables 1, 2 and 3 for specific information and Figures for sample locations and homogeneous area locations).

c. Window Glazing Compound: Window glazing compound applied to the windows in the vicinity of the first floor Mechanical Room A120 is assumed to contain asbestos based on positive samples from building 1275. The remainder of the windows has been replaced with newer aluminum frame components and is non-asbestos containing. -(Refer to Tables 2 and 3 for specific information and Figures for homogeneous area location).

d. Window Caulking Compound: Caulking compound around the metal window frame at the first floor Mechanical Room A120 is assumed to contain asbestos based on positive samples from building 1275. -(Refer to Tables 2 and 3 for specific information and Figures for homogeneous area locations).

e. Fire Rated Doors: Fire rated doors were not sampled, with the exception of the Mechanical Room A120, since destruction of the door would be required. As a result, all such doors are assumed to be asbestos containing. Approximately one hundred and eighteen doors of seven types are listed in the door schedule on as built drawing dated 1979 Plate A17 from the Barracks Modernization project of that time frame. It is suggested that one door of each type be inspected at demolition to determine if asbestos is present. -(Refer to Tables 1, 2 and 3 for specific information Figures for sample location and homogeneous area locations).

f. Gaskets: Gaskets between flanges in the mechanical piping systems are assumed to contain asbestos. The majority of these will be found in Mechanical Room A120 and are not indicated on a floor plan Figure.

Surfacing Materials

Surfacing material is friable material that is sprayed on, troweled on, or otherwise applied to surfaces for decorative or other purposes.

a. No asbestos-containing surfacing material was identified at Building 1276.

Conclusions

The following materials found at Building No. 1276 contain or are assumed to contain positive amounts of asbestos:

a. Floor Tile & Mastic: Floor tiles and or mastic throughout Building 1276 contain asbestos.

b. *Floor Joint Sealer:* Floor joint sealer in many of the barracks store rooms contains asbestos

c. *TSI Pipe Insulation:* TSI pipe run and fitting insulation on the domestic water piping within the main building contains asbestos. TSI pipe run and fitting insulation on portions of the storm drainage piping system inside the building contains asbestos. TSI debris within the pipe pit in Mechanical Room A120 is assumed to contain asbestos. TSI pipe run and fitting material on the steam and condensate lines in the exterior valve pit and underground to the building is assumed to contain asbestos. TSI mastic on the joints and seams of the dual temperature water piping in the valve pit and underground is assumed to contain asbestos.

d. *Window Glazing Material:* Window glazing material on windows near the first floor Mechanical Room A120 is assumed to contain asbestos.

e. *Window Caulking Material:* Window caulking material on the window frame at the first floor Mechanical Room A120 window is assumed to contain asbestos.

f. *Fire Rated Doors:* Fire rated doors are assumed to contain asbestos.

g. *Gaskets:* Gaskets within the mechanical piping systems are assumed to contain asbestos.

List of Tables

List of Figures

Appendices

TABLE 1
SUSPECT ACM SAMPLES
HUNTER ARMY AIRFIELD, BUILDING 1276

FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE & %
1276-M-1PR	**TSI Pipe run insulation**	**Mechanical Room A120**	**15% chrysotile**
1276-M-2PE	TSI pipe fitting insulation	Mechanical Room A120	None
1276-M-3	Gypsum wall board	Mechanical Room A120	None
1276-M-4	Fire door insulation	Mechanical Room A120	None
1276-E-5PR	**TSI Pipe run insulation**	**Electrical Room A121**	**15% chrysotile**
1276-E-6PR	**TSI Pipe run insulation**	**Electrical Room A121**	**15% chrysotile**
1276-E-7PR	**TSI Pipe run insulation**	**Electrical Room A121**	**15% chrysotile**
1276-E-8PE	TSI pipe fitting insulation	Electrical Room A121	None
1276-E-9PE	TSI pipe fitting insulation	Electrical Room A121	None
1276-1W-10	12” X 12” tan/brn/white floor tile & mastic	West wing, first floor corridor	None
1276-1W-11	2’ X 4’ ceiling tile	West wing, first floor corridor	None
1276-1W-12	2’ X 4’ ceiling tile	West wing, first floor corridor	None
1276-1W-13	2’ X 4’ ceiling tile	West wing, first floor corridor	None
1276-1W-14	“Popcorn” ceiling surfacing	West wing, first floor Laundry Room	None
1276-1W-15	Drywall joint compound	West wing , first floor Laundry Room wall	None
1276-1W-16	Drywall joint compound	Room 104 wall, west wing	None
1276-1W-17	**12” X 12” white/gray floor tile & mastic**	**Room 104, west wing**	**Tile 2% chrysotile, mastic 3% chrysotile**

1276-1W-18	Drywall joint compound	Room 140 wall, west wing	None
1276-1W-19	12” X 12” brick pattern floor tile & mastic	Room 129, west wing	None
1276-1W-20	Drywall joint compound	Storage room wall at Room 114, West wing	None
1276-1W-21PR	**TSI Pipe run insulation**	**Room 126 ceiling, west wing**	**40% chrysotile**
1276-1W-22PE	TSI pipe fitting insulation	First floor corridor ceiling, west wing	None
1276-2W-23	Drywall joint compound	Room 225 wall, west wing	None
1276-2W-24	**12” X 12” white/gray floor tile 7 mastic**	**Room 229, west wing**	**Tile & mastic 4% chrysotile**
1276-1S-25	**12” X 12” brn/tan/white floor tile & mastic**	**First floor corridor, south wing**	**Tile NAD, mastic 4% chrysotile**
1276-1S-26	Plaster	Room 139 wall, south wing	None
1276-1S-27	Drywall joint compound	Room 109 wall, south wing	None
1276-1S-28	“Popcorn” ceiling surfacing	First floor Laundry room ceiling, south wing	None
1276-2S-29	“Popcorn” ceiling surfacing	Second floor Laundry room ceiling, south wing	None
1276-2S-30	**12” X 12” brn/tan floor tile & mastic**	**Room 218, south wing**	**Tile 2% chrysotile, mastic 3% chrysotile**
1276-RS-31	Roof flashing, silver coated	South wing roof	None
1276-RS-32	Built-up roofing	South wing roof	None
1276-RS-33	Roof insulation	South wing roof	None
1276-RS-34	Light weight cement	South wing roof	None
1276-1E-35	**12” X 12” brn/tan/white floor tile & mastic**	**First floor corridor, east wing**	**Tile NAD, mastic 2% chrysotile**
1276-2E-36	“Popcorn” ceiling surfacing	Second floor Laundry room ceiling, east wing	None
1276-2E-37	Drywall joint compound	Closet wall at Room 224, east wing	None
1276-2E-38	Floor joint sealer	Closet floor at Room 227, east wing	<1% chrysotile

1276-3E-39	Caulking material	Room 318 CMU wall, east wing	None
1276-1N-40	12” X 12” terrazzo patterned floor tile & mastic	Entryway to first floor corridor, north wing	None
1276-1N-41	Drywall joint compound	Storage room wall at Room 103, north wing	None
1276-1N-42	**12” X 12” brn/off white floor tile & mastic**	**Room 138, north wing**	**5% chrysotile**
1276-1N-43	“Popcorn” ceiling surfacing	First floor Laundry room ceiling, north wing	None
1276-1N-44	Drywall joint compound	First floor Laundry room wall, north wing	None
1276-2N-45	12” X 12” blue/black floor tile & mastic	Room 228, north wing	None
1276-3N-46	**Floor joint sealer**	**Storage room floor at Room 339, north wing**	**3% chrysotile**
1276-RN-47	Flashing cement	North wing roof	None
1276-RN-48	Built-up roofing	North wing roof	None
1276-RN-49	Roof flashing, silver coated	North wing roof	None
1276-RA-50	**12” X 12” brn/white/tan floor tile & mastic**	**Room R 211**	**Tile 5% chrysotile, mastic 6% chrysotile**
1276-RA-51	Drywall joint compound	Room R 211 wall	None
1276-RA-52	Duct flex joint	Room R 209	None
1276-RA-53	Black ceiling adhesive	Room R 212	None
1276-RA-54	Drywall joint compound	Room R 212 wall	None
1276-RA-55	**12” X 12” brn/tan/white floor tile & mastic**	**Room R 211**	**5% chrysotile**
1276-RA-56	Roof flashing	Recreation Area roof	None
1276-RA-57	Built-up roofing	Recreation Area roof	None
1276-RA-58	Roof insulation	Recreation Area roof	None
1276-RA-59	Built-up roofing	Recreation Area roof	None

1276-RA-60	Roof flashing, rolled roofing style	Recreation Area roof	None
1276-RA-61	Roof flashing, silver coated	Recreation Area roof	None
1276-1-62	**12" X 12" tan/gray floor tile & mastic**	**Room A 108**	**5% chrysotile**
1276-1-63	**12" X 12" lt. Gray floor tile & mastic**	**Room A 111**	**Tile NAD, mastic 2% chrysotile**
1276-1-64	**12" X 12" tan/green floor tile & mastic**	**Room A 111**	**Tile 2% chrysotile, mastic NAD**
1276-1-65	12" X 12" lt. Brown floor tile & mastic	Room A 111	None
1276-1-66	Drywall joint compound	Room A 110 wall	None
1276-1-67	Drywall joint compound	Room A 104 wall	None
1276-1-68	Drywall joint compound	Room a 111 wall	None
1276-1-69PR	**TSI Pipe run insulation**	**Room B 110**	**3% chrysotile**
1276-1-70PR	**TSI Pipe run insulation**	**Room B 110**	**6% chrysotile**
1276-1-71PR	**TSI Pipe run insulation**	**Room B 110**	**7% chrysotile**
1276-1-72	Drywall joint compound	Room B 110 wall	None
1276-1-73	Drywall joint compound	Room B 111 wall	None
1276-1-74	Gypsum wall board	Room B 111 wall	None
1276-RX-75	Felt paper	Building exterior, under stucco	None
1276-VP-76	**TSI Pipe run insulation**	**Steam pipe pit, near west wing**	**20% chrysotile**
1276-VP-77	**Insulation mastic**	**HVAC water pipe pit, near west wing**	**8% chrysotile**

Samples testing positive for asbestos indicated in **BOLD** type
NAD = No Asbestos Detected

TABLE 2
ACM QUANTITY SUMMARY
HUNTER ARMY AIRFIELD, BUILDING 1276

Material Description	UNITS	Area Descriptions								
		EXTERIOR WIMDOW FRAMES	ADMINISTR-ATIVE AREA	RECREATION AREA	TYPICAL BARRACKS WINGS	RECREATION AREA ROOF	MECHANICAL ROOMS			TOTALS
Caulking Material	L.F.	125								125
Window Glazing Compound	L.F. 1" Wide	250								250
Floor Tile & Mastic	S.F.		3,714	9,130	56,892					69,736
Floor Joint Sealer	S.F.				1,408					1,408
Fire Rated Doors	EA				118					118
Gaskets	Ea.						100			100

Material Description	UNITS	Area Descriptions								
		ADMINISTRATIVE AREA	RECREATION AREA	TYPICAL BARRACKS WINGS	RECREATION AREA ROOF	MECHANICAL ROOM A120	ELECTRICAL ROOM A121	VALVE PITS & UNDERGROUND		TOTALS
3” OD TSI Pipe Run	L.F.	644	40	6724			40			7448
3” OD TSI Pipe Fittings	Ea.	50		3585			15			3650
TSI 4” Pipe Run	L.F.	30		224						254
TSI 4” Pipe Fittings	Ea.	37		100						137
TSI 5” Pipe Run	L.F.	968	40	4740			80			5784
TSI 5” Pipe Fittings	Ea.	50		460			20			530
TSI 8” Pipe Run	L.F.	40	60	360		20				480
TSI 8” Pipe Fittings	Ea.		8	24		2				34
TSI Mastic	L.F.							730		730
TSI 12” Pipe Run	L.F.							720		720

TABLE 3
MATERIAL CHARACTERIZATION AND ASSESSMENT
HUNTER ARMY AIRFIELD, BUILDING 1276

MATERIAL		CHARACTERISTICS			ASSESSMENT	
Type	**Description**	**Asbestos Yes/No/Assumed**	**Quantity (If ACM)**	**Friable / Non-friable**	**Condition**	**Disturbance Potential**
TSI	3” OD TSI Pipe Run	Yes 15-40%	7448 L.F.	Friable	Damaged	Moderate
TSI	3” OD TSI Pipe Fittings	Assumed	3650 Ea.	Friable	Damaged	Moderate
TSI	4” OD TSI Pipe Run	Yes 15%	254 L.F.	Friable	Damaged	Moderate
TSI	4” OD TSI Pipe Fittings	Assumed	137 Ea.	Friable	Damaged	Moderate
TSI	5” OD TSI Pipe Run	Yes 15%	5784 L.F.	Friable	Damaged	Moderate
TSI	5” OD TSI Pipe Fittings	Assumed	530 Ea.	Friable	Damaged	Moderate
TSI	8” OD TSI Pipe Run	Yes 15%	120 L.F.	Friable	Damaged	Moderate
TSI	8” OD TSI Pipe Fittings	Assumed	10 Ea.	Friable	Damaged	Moderate
Miscellaneous	Gaskets	Assumed	100 Ea.	Non-friable	Good	Low
Miscellaneous	Caulking Material	Assumed	125 L.F.	Non-friable	Damaged	Moderate
Miscellaneous	Window Glazing	Assumed	250 L.F.	Friable	Significantly damaged	High
Miscellaneous	Floor Tile & Mastic	Yes 2-6%	69,736 S.F.	Non-friable	Damaged	Moderate

Miscellaneous	Floor Joint Sealer	Yes 3%	1,408 S.F.	Non-friable	Good	Low
Miscellaneous	Fire Rated Doors	Assumed	118 Ea.	?	Good	Low

S.F. = Square Foot, L.F. = Linear Foot, C.F. = Cubic Foot

Figure 1

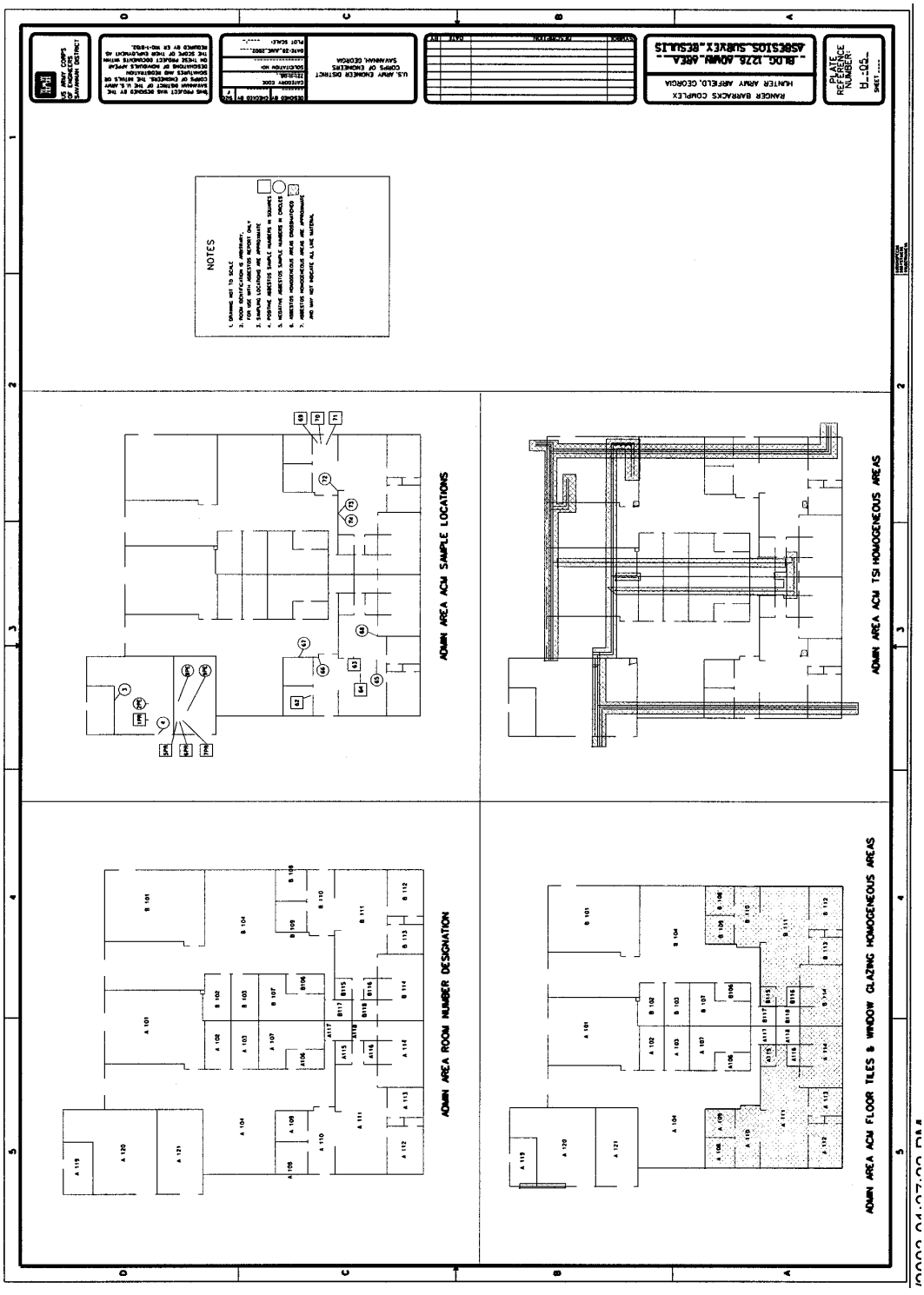

NOTES
ADMIN AREA ACM SAMPLE LOCATIONS
ADMIN AREA ACM TSI HOMOGENEOUS AREAS
ADMIN AREA ROOM NUMBER DESIGNATION
ADMIN AREA ACM FLOOR TILES & WINDOW GLAZING HOMOGENEOUS AREAS

Figure 2

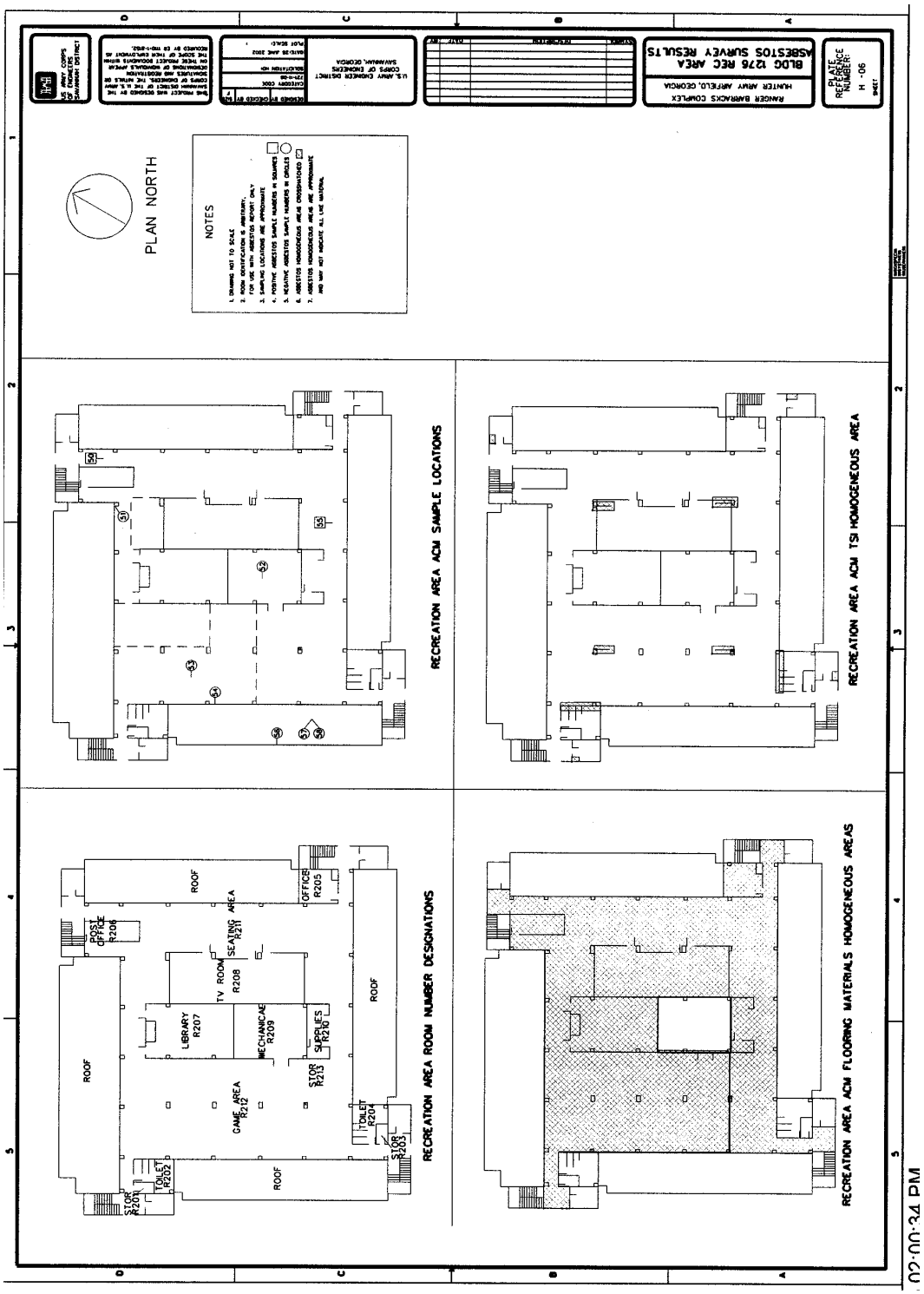
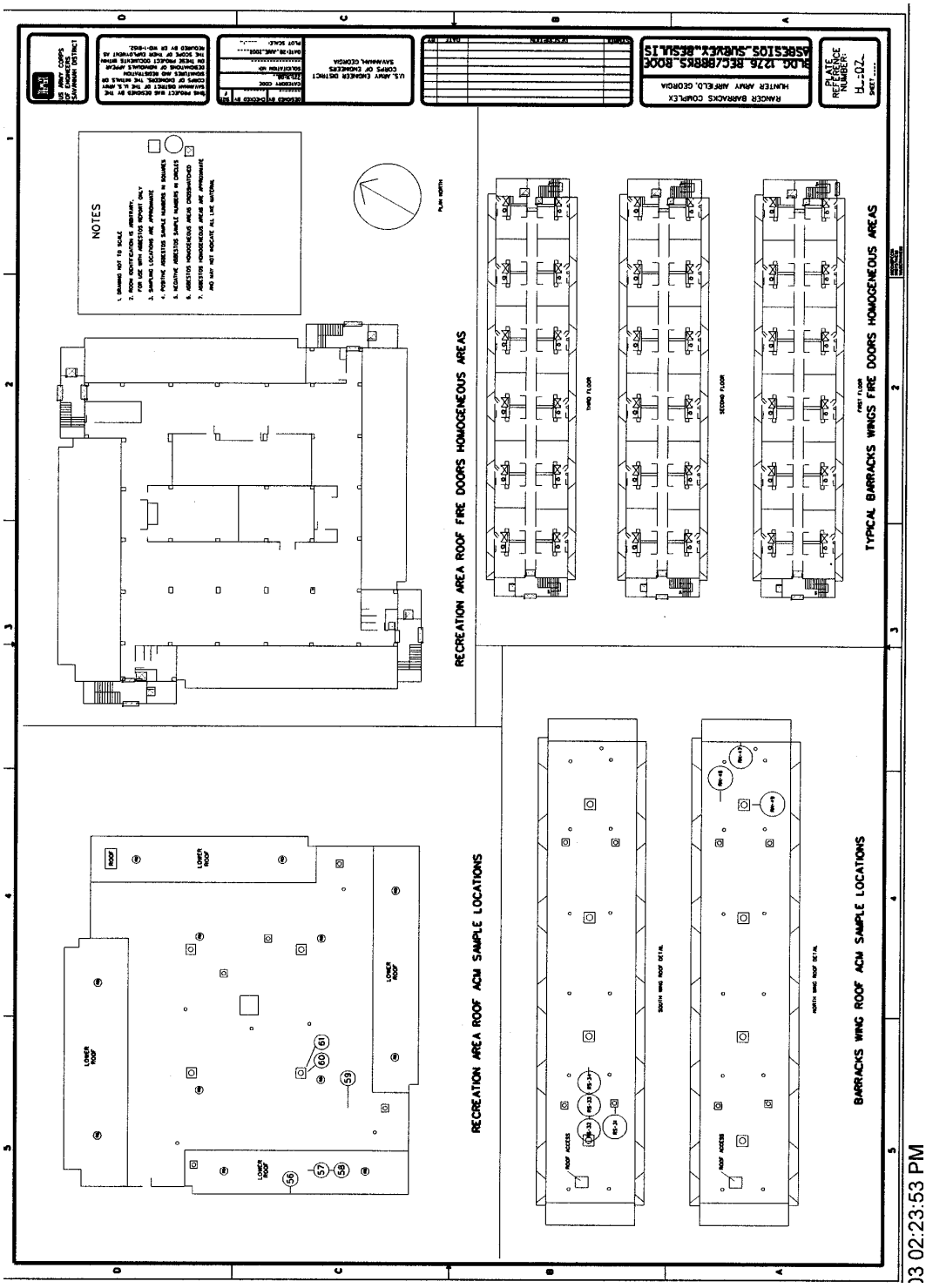
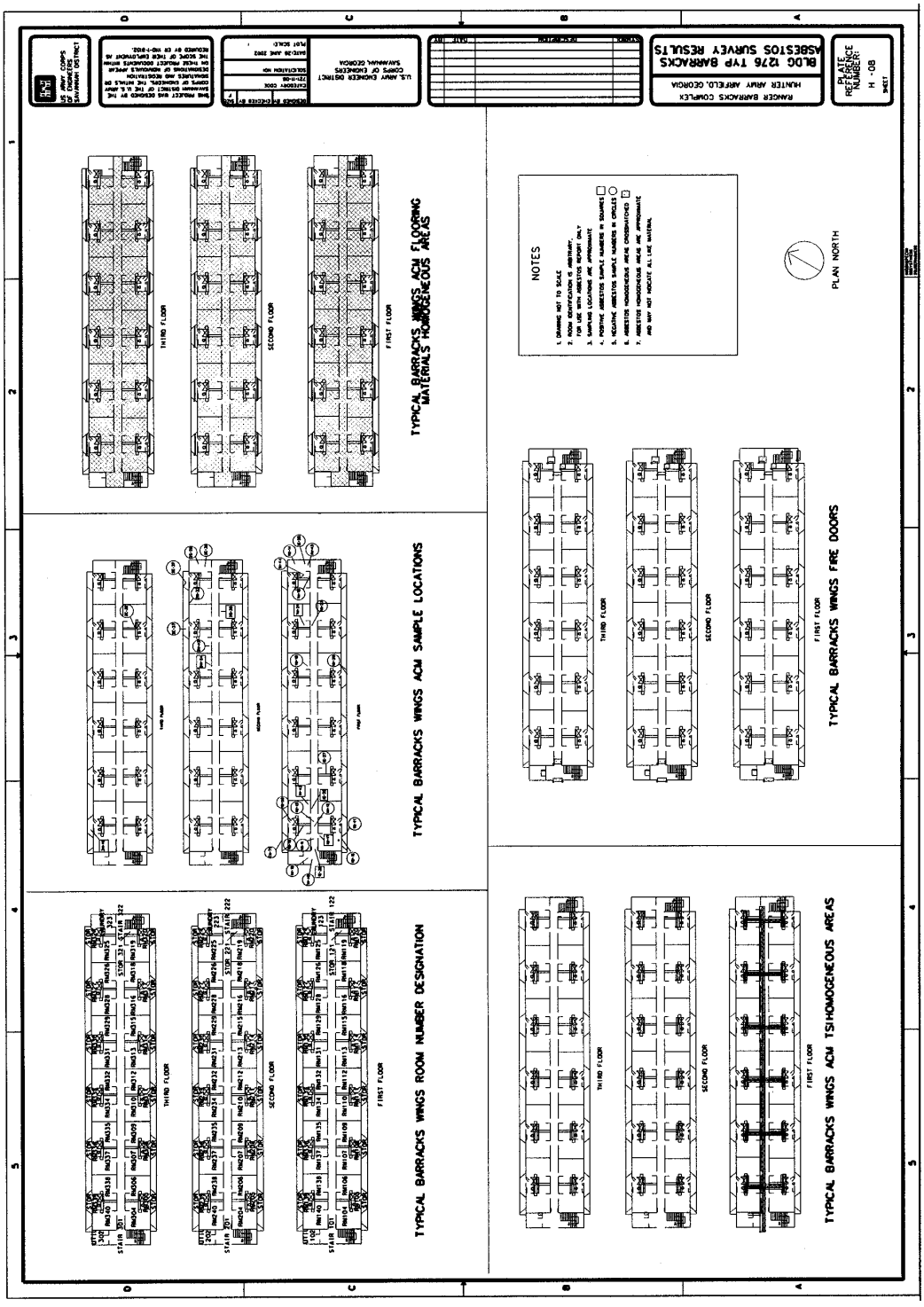

RANGER BARRACKS COMPLEX
HUNTER ARMY AIRFIELD, GEORGIA
BLDG 1276 REC AREA
ASBESTOS SURVEY RESULTS
U.S. ARMY CORPS OF ENGINEERS
SAVANNAH, GEORGIA
PLAN NORTH
NOTES
RECREATION AREA ACM SAMPLE LOCATIONS
RECREATION AREA ACM TSI HOMOGENEOUS AREA
RECREATION AREA ROOM NUMBER DESIGNATIONS
RECREATION AREA ACM FLOORING MATERIALS HOMOGENEOUS AREAS
ROOF
OFFICE R205
POST OFFICE R206
SEATING AREA R211
TV ROOM R208
LIBRARY R207
MECHANICAL R209
SUPPLIES R210
STOR R213
GAME AREA R212
TOILET R204
STOR R203
TOILET R202
STOR R201

Figure 3



03 02:23:53 PM

Figure 4


RANGER BARRACKS COMPLEX
HUNTER ARMY AIRFIELD, GEORGIA
BLDG 1276 TYP BARRACKS
ASBESTOS SURVEY RESULTS
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA
NOTES
PLAN NORTH
TYPICAL BARRACKS WINGS ACM FLOORING MATERIALS HOMOGENEOUS AREAS
TYPICAL BARRACKS WINGS ACM SAMPLE LOCATIONS
TYPICAL BARRACKS WINGS ROOM NUMBER DESIGNATION
TYPICAL BARRACKS WINGS FIRE DOORS
TYPICAL BARRACKS WINGS ACM TSI HOMOGENEOUS AREAS
THIRD FLOOR
SECOND FLOOR
FIRST FLOOR

Appendix A

Analytical Report - Hygeia Laboratories, Inc.

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

US Army Corp of Engineers
Environmental & Materials Unit
200 North Cobb Parkway
Bldg. 400, Ste. 404
Marietta, GA 30062

11/5/2002

Subject:

Hygeia Project Number: A0211016
Client Project Number/Name: 7649 /Hunter Bldg 1276

Dear Mr. Tim Jones:

Enclosed are the analytical results of bulk samples submitted by you to this laboratory on 11/4/2002. All analyses were performed by polarized light microscopy (PLM) in accordance with the EPA method as defined in Perkins and Harvey, July 1993, "Methods for the Determination of Asbestos in Bulk Materials" 61pp. (EPA/600/R-93/116). The reported percentages are volume estimates obtained by calibrated visual estimation. The results in this report apply only to the items tested.

The EPA defines an asbestos containing material (ACM) as a material that is reported to contain greater than one percent asbestos. HYGEIA is only responsible for the accuracy of the analytical results provided in this report and cannot be held responsible for the errors resulting from improper sample collection techniques. This report may not be used to claim product endorsement by NVLAP or any other U.S. Government agency.

For nonhomogeneous samples, each layer was analyzed separately and the results combined to form the reported value except where otherwise noted. Vinyl floor tile samples with negative results by PLM should be submitted for confirmation by transmission electron microscopy (TEM). Friable samples containing less than 10% asbestos as determined by PLM may be resubmitted for point counting at your discretion.

Thank you for using our analytical services. HYGEIA Laboratories has been NVLAP accredited since 1988. Our current NVLAP code is 102087-0. We will keep a copy of this report on file for three years. We will dispose of your samples in 60 days unless you request that we return them. This report my be reproduced only in its entirety with the consent of Hygeia Laboratories, Inc. If you have any questions, please call us at (770) - 514-6933.

Sincerely,

Clayton Call
Asbestos Laboratory Manager

NVLAP# 102087-0
Texas Dept. of Health # 30-0232
Commonwealth of Virginia # 3333-000210

Hygeia Laboratories Inc.
1300 Williams Drive, Suite A
Marietta, GA 30066
(770) 514-6933

PLM Analysis Summary

Hygeia Project Number: A0211016
Client Project Number/Name: 7649 / Hunter Bldg 1276

Analyzed: 10/30/2002 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-M-1PR	A0211016-01	Multi	Fibrous	No	15%					30%			55%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-M-2PE	A0211016-02	Brown	Fibrous	Yes						30%	30%		40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-M-3	A0211016-03	White	Cons.	Yes						30%			70%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-M-4	A0211016-04	Gray	Fibrous	Yes							80%		20%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-E-5PR	A0211016-05	Gray	Fibrous	Yes	15%					30%			55%	

Comment: **Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-E-6PR	A0211016-06	Brown	Fibrous	Yes	15%					30%			55%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-E-7PR	A0211016-07	Brown	Fibrous	Yes	15%					30%			55%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-E-8PE	A0211016-08	Tan	Fibrous	Yes							60%		40%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-E-9PE	A0211016-09	Brown	Fibrous	Yes							70%		30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-10	A0211016-10	Brown	Cons.	Yes									100%	

Comment: **Tile: NAD. Mastic: NAD. No Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-11	A0211016-11	Tan	Fibrous	Yes						40%	20%		40%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-12	A0211016-12	Tan	Cons.	Yes						40%	20%		40%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-13	A0211016-13	Tan	Fibrous	Yes						40%	20%		40%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-14	A0211016-14	Multi	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-15	A0211016-15	Gray	Cons.	Yes						20%			80%	

Comment: No Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-16	A0211016-16	Gray	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-17	A0211016-17	Gray	Cons.	Yes	2%								98%	

Comment: **Tile: 2% Chrysotile. Mastic: 3% Chrysotile. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-18	A0211016-18	White	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-19	A0211016-19	Multi	Cons.	Yes									100%	

Comment: **Tile & Mastic: NAD: No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-20	A0211016-20	Brown	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-21PR	A0211016-21	Gray	Fibrous	Yes	40%					10%			50%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1W-22PE	A0211016-22	Gray	Fibrous	Yes							70%		30%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-2W-23	A0211016-23	Multi	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-2W-24	A0211016-24	Multi	Cons.	Yes	4%								96%	

Comment: **Tile: 4% Chrysotile. Mastic: 4% Chrysotile. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1S-25	A0211016-25	Brown	Cons.	Yes	<1%								100%	

Comment: **Tile: NAD. Mastic: 4% Chrysotile. Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1S-26	A0211016-26	Cream	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1S-27	A0211016-27	Cream	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1S-28	A0211016-28	Tan	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-2S-29	A0211016-29	Tan	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-2S-30	A0211016-30	Brown	Cons.	Yes	2%								98%	

Comment: **Tile: 2% Chrysotile. Mastic: 3% Chrysotile. Asbestos Detected.**

Hygeia Project Number: A0211016
Client Project Number/Name: 7649 / Hunter Bldg 1276

Analyzed: 10/30/2002 **by** WAS

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RS-31	A0211016-31	Multi	Cons.	Yes						30%			70%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RS-32	A0211016-32	Black	Gummy	Yes							20%		80%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RS-33	A0211016-33	Tan	Fibrous	Yes						80%			20%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RS-34	A0211016-34	Gray	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1E-35	A0211016-35	Gray	Cons.	Yes	<1%								100%	

Comment: Tile: NAD. Black Mastic: 2% Chrysotile. Brown Mastic: NAD. Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-2E-36	A0211016-36	White	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-2E-37	A0211016-37	Multi	Cons.	Yes						20%			80%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-2E-38	A0211016-38	Black	Cons.	Yes	<1%								100%	

Comment: Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-3E-39	A0211016-39	Brown	Rubbery	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1N-40	A0211016-40	Gray	Cons.	Yes									100%	

Comment: Tile: NAD. Mastic: Not Enough to Analyze. No Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1N-41	A0211016-41	White	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1N-42	A0211016-42	Brown	Cons.	Yes	5%								95%	

Comment: **Tile: 5% Chrysotile. Black Mastic: 5% Chrysotile. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1N-43	A0211016-43	White	Cons.	Yes									100%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1N-44	A0211016-44	Brown	Cons.	Yes						5%			95%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-2N-45	A0211016-45	Gray	Cons.	Yes									100%	

Comment: **Tile & Mastic: NAD. No Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-3N-46	A0211016-46	Black	Gummy	Yes	3%					30%			67%	

Comment: Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RN-47	A0211016-47	Black	Gummy	Yes						40%			60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RN-48	A0211016-48	Black	Cons.	Yes						30%	10%		60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RN-49	A0211016-49	Black	Fibrous	Yes						40%			60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-50	A0211016-50	Gray	Cons.	Yes	5%								95%	

Comment: Tile : 5% Chrysotile. Mastic: 6% Chrysotile. Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-51	A0211016-51	White	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-52	A0211016-52	Brown	Fibrous	Yes						30%			70%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-53	A0211016-53	Brown	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-54	A0211016-54	Gray	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-55	A0211016-55	Brown	Cons.	Yes	5%								95%	

Comment: Tile: 5% Chrysotile. Mastic: 5% Chrysotile. Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-56	A0211016-56	Black	Gummy	No									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-57	A0211016-57	Black	Gummy	No									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-58	A0211016-58	Black	Fibrous	Yes						70%			30%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-59	A0211016-59	Black	Layered	No						20%	20%		60%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-60	A0211016-60	Black	Layered	No						20%	20%		60%	

Comment: No Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-RA-61	A0211016-61	Multi	Cons.	Yes						20%			80%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-62	A0211016-62	Brown	Cons.	Yes	5%								95%	

Comment: **Tile: 5% Chrysotile. Mastic: 5% Chrysotile. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-63	A0211016-63	Gray	Cons.	No	<1%								100%	

Comment: **Tile: NAD. Brown & Black Mastic: 2% Chrysotile. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-64	A0211016-64	Tan	Cons.	No	2%								98%	

Comment: **Tile: 2% Chrysotile. Brown Mastic: NAD. Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-65	A0211016-65	Gray	Cons.	Yes									100%	

Comment: **Tile: NAD. No Mastic Present. No Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-66	A0211016-66	Multi	Cons.	Yes						20%			80%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-67	A0211016-67	White	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-68	A0211016-68	White	Cons.	Yes									100%	

Comment: No Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-69PR	A0211016-69	Brown	Fibrous	Yes	3%					67%			30%	

Comment: Asbestos Detected.

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-70PR	A0211016-70	Brown	Fibrous	Yes	6%					64%			30%	

Comment: Asbestos Detected.

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-71PR	A0211016-71	Brown	Fibrous	Yes	7%					63%			30%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-72	A0211016-72	White	Cons.	Yes									100%	

Comment: **This is not a floor tile. No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-73	A0211016-73	Multi	Cons.	Yes						20%			80%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-1-74	A0211016-74	White	Cons.	Yes						30%			70%	

Comment: **No Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-EX-75	A0211016-75	Brown	Fibrous	Yes						70%			30%	

Comment: **No Asbestos Detected.**

Sample ID		Sample Description			Asbestos Percent					Other Fibers			Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-VP-76	A0211016-76	Tan	Cons.	Yes	20%								80%	

Comment: **Asbestos Detected.**

Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	OF	B/F	ONF
1276-VP-77	A0211016-77	Black	Gummy	Yes	8%								92%	

Comment: **Asbestos Detected.**

abbreviations:

Chr. = chrysotile
Am. = amosite
Cro. = crocidolite
An. = anthophyllite
T/A = tremolite/actinolite

cell = cellulose
glass = fibrous glass
syn = synthetic
sty = styrene foam
det = detected

per = perlite
ver = vermiculite
MF = Mineral filler
B/F = Binder / filler
NAD = No asbestos detected

OF = Other Fibers
ONF = Other Non-Fibers
Cons = Consolidated

Appendix B

Sample Chain of Custody Forms

A0241016

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project:	**Hunter Bldg. 1276**	Job No.:	**7649**
Sampler:	Tim Jones	Analysis:	PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
10/17/2002	1276-M-1PR	44759	TSI pipe run
10/17/2002	1276-M-2PE	44760	TSI pipe elbow
10/17/2002	1276-M-3	44761	Gypsum wall board
10/17/2002	1276-M-4	44762	Fire door insulation
10/17/2002	1276-E-5PR	44763	TSI pipe run
10/17/2002	1276-E-6PR	44764	TSI pipe run
10/17/2002	1276-E-7PR	44765	TSI pipe run
10/17/2002	1276-E-8PE	44766	TSI pipe elbow
10/17/2002	1276-E-9PE	44767	TSI pipe elbow
10/17/2002	1276-1W-10	44768	Floor tile
10/17/2002	1276-1W-11	44769	Ceiling tile
10/17/2002	1276-1W-12	44770	Ceiling tile
10/17/2002	1276-1W-13	44771	Ceiling tile
10/17/2002	1276-1W-14	44772	"Popcorn" ceiling surfacing
10/17/2002	1276-1W-15	44773	Drywall joint compound
10/18/2002	1276-1W-16	44774	Drywall joint compound
10/18/2002	1276-1W-17	44775	Floor tile
10/18/2002	1276-1W-18	44776	Drywall joint compound
10/18/2002	1276-1W-19	44777	Floor tile
10/18/2002	1276-1W-20	44778	Drywall joint compound
10/18/2002	1276-1W-21PR	44779	TSI pipe run
10/18/2002	1276-1W-22PE	44780	TSI pipe elbow

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	10-25-02	1425			

Comments: Fax results to Tim Jones @ 678-354-0330

NOV 5 AM 10:11

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project:	**Hunter Bldg. 1276**	Job No.:	**7649**
Sampler:	Tim Jones	Analysis:	PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
10/18/2002	1276-2W-23	44781	Drywall joint compound
10/18/2002	1276-2W-24	44782	Floor tile
10/18/2002	1276-1S-25	44783	Floor tile
10/18/2002	1276-1S-26	44784	Plaster
10/18/2002	1276-1S-27	44785	Drywall joint compound
10/18/2002	1276-1S-28	44786	"Popcorn" ceiling surfacing
10/18/2002	1276-2S-29	44787	"Popcorn" ceiling surfacing
10/18/2002	1276-2S-30	44788	Floor tile
10/18/2002	1276-RS-31	44789	Roofing cement
10/18/2002	1276-RS-32	44790	Built up roofing
10/18/2002	1276-RS-33	44791	Roof insulation
10/18/2002	1276-RS-34	44792	Light weight concrete
10/18/2002	1276-1E-35	44793	Floor tile
10/18/2002	1276-2E-36	44794	"Popcorn" ceiling surfacing
10/18/2002	1276-2E-37	44795	Drywall joint compound
10/18/2002	1276-2E-38	44796	Floor joint sealer
10/18/2002	1276-3E-39	44797	Caulking material
10/18/2002	1276-1N-40	44798	Floor tile
10/18/2002	1276-1N-41	44799	Drywall joint compound
10/18/2002	1276-1N-42	44800	Floor tile
10/18/2002	1276-1N-43	44801	"Popcorn" ceiling surfacing
10/18/2002	1276-1N-44	44802	Drywall joint compound

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	10-25-02	1425			

Comments: Fax results to Tim Jones @ 678-354-0330

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project:	**Hunter Bldg. 1276**	Job No.:	**7649**
Sampler:	Tim Jones	Analysis:	PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
10/18/2002	1276-2N-45	44803	Floor tile
10/18/2002	1276-3N-46	44804	Floor joint sealer
10/18/2002	1276-RN-47	44805	Roofing cement
10/18/2002	1276-RN-48	44806	Built up roofing
10/18/2002	1276-RN-49	44807	Vent flashing
10/18/2002	1276-RA-50	44808	Floor tile
10/18/2002	1276-RA-51	44809	Drywall joint compound
10/18/2002	1276-RA-52	44810	Ductwork flex joint
10/18/2002	1276-RA-53	44811	Adhesive
10/18/2002	1276-RA-54	44812	Drywall joint compound
10/18/2002	1276-RA-55	44813	Floor tile
10/18/2002	1276-RA-56	44814	Roof flashing
10/18/2002	1276-RA-57	44815	Built up roofing
10/18/2002	1276-RA-58	44816	Roof insulation
10/18/2002	1276-RA-59	44817	Built up roofing
10/18/2002	1276-RA-60	44818	Vent flashing
10/18/2002	1276-RA-61	44819	Roofing cement
10/22/2002	1276-1-62	44820	Floor tile
10/22/2002	1276-1-63	44821	Floor tile
10/22/2002	1276-1-64	44822	Floor tile
10/22/2002	1276-1-65	44823	Floor tile
10/22/2002	1276-1-66	44824	Drywall joint compound

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	10-25-02	1425			

Comments: Fax results to Tim Jones @ 678-354-0330

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project:	**Hunter AAF Building 1276**	Job No.:	**7649**
Sampler:	Tim Jones	Analysis:	PLM

DATE	FIELD ID	EMU ID	COMPONENTS/NOTES
10/22/2002	1276-1-67	44825	Drywall joint compound
10/22/2002	1276-1-68	44826	Drywall joint compound
10/22/2002	1276-1-69PR	44827	TSI pipe run
10/22/2002	1276-1-70PR	44828	TSI pipe run
10/22/2002	1276-1-71PR	44829	TSI pipe run
10/22/2002	1276-1-72	44830	Drywall joint compound
10/22/2002	1276-1-73	44831	Drywall joint compound
10/22/2002	1276-1-74	44832	Gypsum wallboard
10/22/2002	1276-EX-75	44833	Felt paper
10/22/2002	1276-VP-76	44834	TSI block insulation
10/22/2002	1276-VP-77	44835	TSI mastic

Relinquished By	Date	Time	Received By	Date	Time
Tim Jones	10-25-02	1425			

Comments: Fax results to Tim Jones @ 678-354-0330

Appendix C

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed

an examination that meets all criteria required for

EPA / AHERA (TSCA Title II) Approved Accreditation

and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997
Course Date

2360
Certificate Number

February 12, 1997
Examination Date

February 11, 1998
Expiration Date

William H. Spain - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation
and NESHAP Regulations Training

Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

7283
Certificate Number

February 26, 2002
Examination Date

February 25, 2003
Expiration Date

Thomas G. Laubenthal - Course Director

Rachel G. McCain - Exam Administrator

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

HYGEIA LABORATORIES, INC.

MARIETTA, GA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 2003

Effective through

David F. Alderman

For the National Institute of Standards and Technology

NVLAP Lab Code: 102087-0

NVLAP-01C (11-95)

National Institute of Standards and Technology

NVLAP®

National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation

BULK ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 102087-0**

HYGEIA LABORATORIES, INC.
1300 Williams Drive, Suite A
Marietta, GA 30066-6299
Mr. Clayton Call
Phone: 770-514-6933 Fax: 770-514-6966
E-Mail: call67@atc-enviro.com

NVLAP Code	*Designation*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

March 31, 2003

Effective through

David F. Alderman

For the National Institute of Standards and Technology

NVLAP-01S (11-95)

Savannah District
Environmental and Materials Unit

US Army Corps of Engineers®

Hazardous Building Materials Survey

Building No. 1276 Hunter Army Air Field, Georgia

Prepared by Timothy A. Jones

Building 1276, Hunter Army Air Field, GA

by Timothy A. Jones

Final Report

Prepared for **US Army Corps of Engineers**
Savannah District

Hazardous Building Materials Survey Report

Introduction

Background

Building No. 1276 is a 1950s vintage three-story structural concrete and masonry frame structure with multi-layered built-up asphalt and felt roof systems over structural concrete. The floor systems are structural concrete covered generally with vinyl tile. The exterior of the building has been renovated at some time and covered with a stucco material over expandable polystyrene and cloth mesh, effectively hiding the original exterior structure and hindering inspection of that original finish. The building is divided into five main sections. The center section is two stories with the first incorporating office/storage space and the second story divided between recreational areas, storage areas, Post Office, offices, two restrooms and a mechanical room. The four remaining sections are identical three story barracks wings. The barracks rooms are laid out such that generally two sleeping quarters share one bathroom and storage room, with the exception that the two outer end sleeping rooms do not share restrooms. Each floor has a separate janitor's closet, laundry room and storage room. The uppermost floor's storage room contains an access opening to the roof of that particular wing. The roofs of the four wings are identical in appearance. Rooms on the building floor plans are arbitrarily numbered for identification in this report only as indicated on Figure 1.

Description of study

Investigation

This report documents the hazardous building materials survey of Building No. 1276 at Hunter Army Air Field, Georgia conducted on 17-18 October 2002 by USACE Savannah District employees Tim Jones and Mike Ruth. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District, which includes the USAEHA guidance for demolition debris characterization by TCLP sampling.

Conclusions

The following information gathered during the survey of Building 1276 is presented in attached information:

a. *Light Count:* The fluorescent and mercury vapor light count results are presented in Table 1.

b. *Lead Building Materials:* Inspection of the building revealed lead in the plumbing drainage and vent piping system used as pipe joints. Lead flashings are used at the pipe penetrations through the roof. Details are outlined in Table 2.

c. *T*CLP *Lead Results:* Sampling of building components was performed as required and components were processed and mixed in the proper percentages and given a sample identification of HAAF B 1276 TCLP. TCLP analysis by Hygeia Laboratories indicates that lead is not present above Hygeia's reporting limit of 0.5 mg/L, and therefore is below the regulatory limit of 5 mg/L for landfill disposal. Field sampling data including component type, color, TCLP mix percentage and approximate sampling location is presented in Table 3. A scanned copy of Hygeia's analytical report is included as Appendix A.

d. *Thermostats:* Two hundred and seventy-six mercury-containing thermostats were located in Building 1276, one in each barracks sleeping room and one in each laundry room.

e. *Smoke Detectors:* Three hundred and twenty-four smoke detectors were located in building 1276, one in each barracks sleeping room and five in each barracks wing corridor. Some smoke detectors contain a small radioactive source used as the detector and must be disposed of properly. Others contain electronic circuit boards that should be properly disposed.

f. *Transformers:* One large pad mounted transformer was located on the exterior of the building near the mechanical room.

g. *Compressed Refrigerant Gas:* Twenty-one window air-conditioning units were located in Building 1276; nineteen in the barracks wings and two in the recreation area. One rooftop air conditioning unit is on the lower roof associated with the Recreation Area. Twelve drinking fountains were located in Building 1276, one on each floor of the barracks wings. All of these units are assumed to contain refrigerant gas that should be recovered prior to demolition.

h. *Above and Underground Storage Tanks:* None of either were located associated with Building 1276.

List of Tables

List of Figures

Appendix

Tables

TABLE 1
HUNTER ARMY AIR FIELD BUILDING 1276
FLUORESCENT AND MERCURY LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	11	2 bulb, 2 foot square fluorescent fixtures
Interior	24	1 bulb, 4 foot fluorescent fixtures
Interior	735	2 bulb, 4 foot fluorescent fixtures
Interior	28	Exit Lights
Interior	76	Battery backup emergency lights

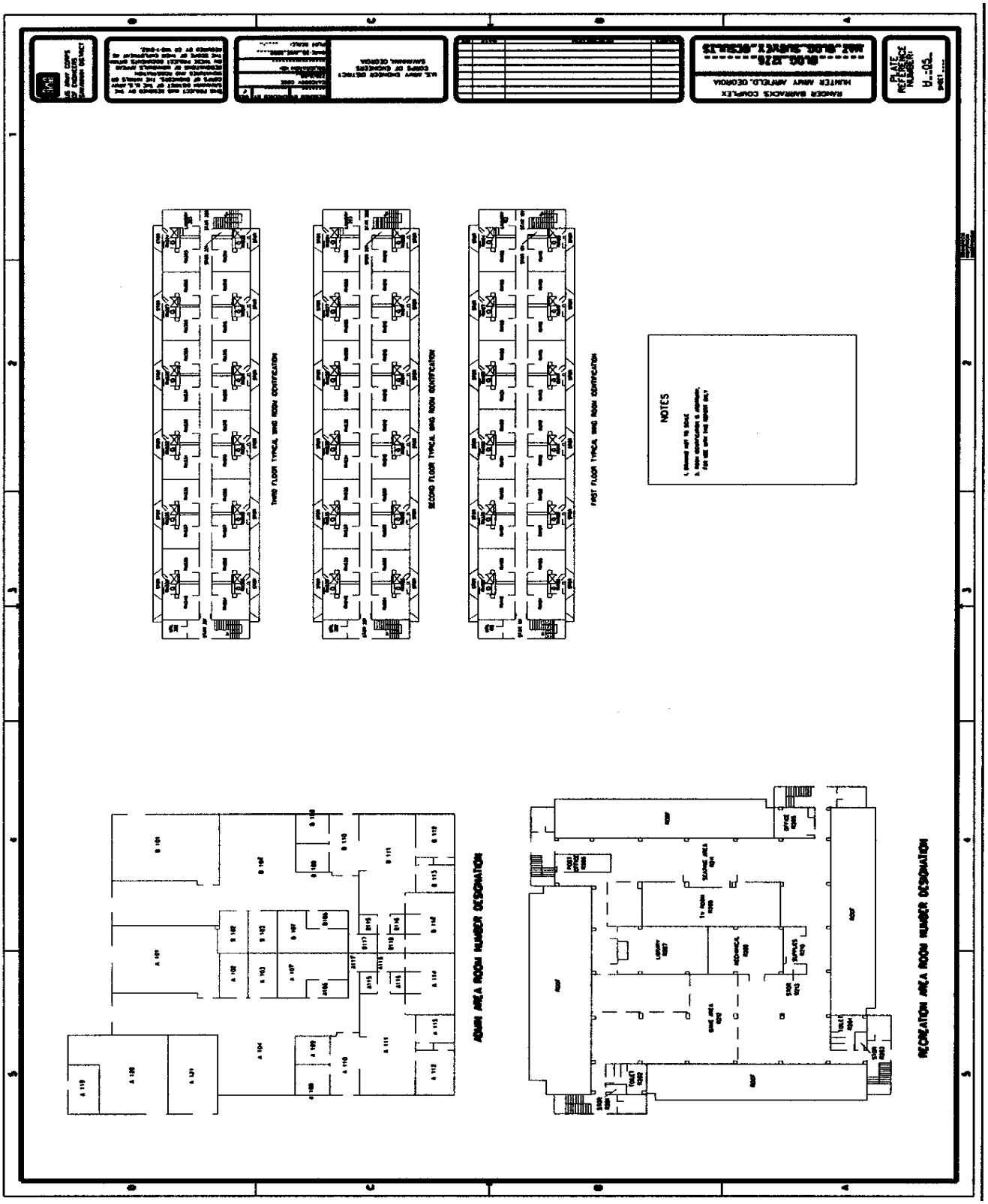
TABLE 2
HUNTER ARMY AIR FIELD BUILDING 1276
LEAD BUILDING COMPONENTS

BUILDING COMPONENT	DESCRIPTION	LOCATION	ESTIMATED NUMBER
Hot poured lead pipe joint	In plumbing drainage, waste and vent piping	Under slab and in plumbing chase walls	3000-4000
Lead Pipe Flashings	Roof flashing	Roof	60

TABLE 3
HUNTER ARMY AIR FIELD BUILDING 1276
TCLP COMPOSITE SAMPLE COMPONENTS

BUILDING COMPONENT	DESCRIPTION	LOCATION	PERCENTAGE OF SAMPLE
Unpainted Wood	Wall framing	Room A 104	26%
Interior wall covering	White painted drywall	North wing, 3rd floor, storage room	23%
Roofing Components	Built-up roofing membrane	North wing roof	7%
Interior Floor Coverings	Floor tile	North wing, 1st floor, room 138	10%
Block, Brick, Concrete	Tan painted block	South wing, 1st floor corridor wall	25%
Ceiling Material	White ceiling tile	South wing, 2nd floor corridor	7%
Painted Wood-Interior	Black base molding	East wing, 3rd floor corridor	1%
Painted Wood-Exterior	Tan stucco substituted, no exterior wood present	Exterior, near mechanical room	1%

Figure 1


THIRD FLOOR TYPICAL BMD ROOM IDENTIFICATION
SECOND FLOOR TYPICAL BMD ROOM IDENTIFICATION
FIRST FLOOR TYPICAL BMD ROOM IDENTIFICATION
NOTES
ADMIN AREA ROOM NUMBER DESIGNATION
RECREATION AREA ROOM NUMBER DESIGNATION

Appendix A

Analytical Report – Hygeia Laboratories, Inc

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

Lab Project No. M0210286 Report Date: 11/01/02

Client Name: **US Army Corp of Engineers - Atlanta**
Contact: **Tim Jones**
Address: Environmental & Materials Unit
200 North Cobb Parkway
Bldg. 400, Ste. 404
Marietta, GA 30062
Project Name: **Hunter AAF Ranger Barracks Complex**
Project ID: 7651
Receipt Date: 10/25/2002

Case Narrative

1. The sample holding times were met for all analyses.
2. Where applicable, results & reporting limits are based on wet weight; dry weight calculations available.
3. The temperature of the sample cooler as received by the laboratory was room temperature.
4. Hygeia Labs assumes a sampling time of 12:00 PM unless otherwise specified on the Chain of Custody.

Reviewed By: AWS

Respectively Submitted:
Hygeia Laboratories, Inc.

Sample Identification

Lab Sample #	Client Sample ID	Sample Supply	Collected
M0210286-01	HAAF B 1275 TCLP	Bulk	10/25/02
M0210286-02	HAAF B 1276 TCLP	Bulk	10/25/02
M0210286-03	HAAF B 1412 TCLP	Bulk	10/25/02
M0210286-04	HAAF B 1413 TCLP	Bulk	10/25/02

TCLP Metals By ICP	Units: mg/L (ppm)	Method #: EPA_1311/6010B
Matrix: Leachate	Analysis Date: 10/31/2002	Prep Date: 10/29/2002 Analyst: SR
Lab Sample #: **M0210286-01**	Client ID: **HAAF B 1275 TCLP**	

Analyte(s)	CAS #	Result	Report Limit	Flag Code
Lead	7439-92-1	BRL	0.5	

TCLP Metals By ICP	Units: mg/L (ppm)	Method #: EPA_1311/6010B
Matrix: Leachate	Analysis Date: 10/31/2002	Prep Date: 10/29/2002 Analyst: SR
Lab Sample #: **M0210286-02**	Client ID: **HAAF B 1276 TCLP**	

Analyte(s)	CAS #	Result	Report Limit	Flag Code
Lead	7439-92-1	BRL	0.5	

TCLP Metals By ICP	Units: mg/L (ppm)	Method #: EPA_1311/6010B
Matrix: Leachate	Analysis Date: 10/31/2002	Prep Date: 10/29/2002 Analyst: SR
Lab Sample #: **M0210286-03**	Client ID: **HAAF B 1412 TCLP**	

Analyte(s)	CAS #	Result	Report Limit	Flag Code
Lead	7439-92-1	BRL	0.5	

TCLP Metals By ICP	Units: mg/L (ppm)	Method #: EPA_1311/6010B
Matrix: Leachate	Analysis Date: 10/31/2002	Prep Date: 10/29/2002 Analyst: SR
Lab Sample #: **M0210286-04**	Client ID: **HAAF B 1413 TCLP**	

Analyte(s)	CAS #	Result	Report Limit	Flag Code
Lead	7439-92-1	1.3	0.5	

NOTES:

- Results relate only to the samples tested as received (See Chain-of-Custody).
- BRL = "Below Reporting Limit"
- RL = "Reporting Limit"
- E = "Estimated Result"
- Dates are presented in the format "month/day/year"

Certifications

Alabama - Lab ID 40970; Arkansas; Connecticut - No. PH 0208; Delaware - GA040; Georgia - No. 804; Indiana - Lab ID C-GA-01
Kentucky - Lab ID 90053, UST - No. 0005; Louisiana; Maryland - No. 293; Massachussetts No. M - GA040; North Carolina - No. 409
Rhode Island, License No. 245; South Carolina - No. 98012001; Tennessee - Lab ID 02827; Virginia - Lab ID 00024
South Carolina - No. 98012; Tennessee - Lab ID 02827 (DW), UST Program; Virginia - Lab ID 0024

Accreditations

American Association for Laboratory Accreditation, A2LA - No. 330.01;
American Industrial Hygiene Association, AIHA - Lab ID 100649; NELAC - State of Florida DOH, No. E87257

US Army Corps of Engineers
Savannah District
Environmental & Materials Unit

Chain of Custody Record

M0210286

Project Name: Hunter AAF Ranger Barracks Complex
Job #: 7651
TAT: 7 days

Date	Time	Pres.	Gr	Cm	Site Code/Sample Number	No. of Containers	TCLP Lead				Lab #	SAD No.	Matrix
10-25-02				✓	HAAF B 1275 TCLP	8	✓				1A	44893	Building Composite
↓				✓	HAAF B 1276 TCLP	8	✓				2A	44894	↓
				✓	HAAF B 1412 TCLP	8	✓				3A	44895	
↓				✓	HAAF B 1413 TCLP	8	✓				4A	44896	
					REPORT IN PPM								
					(NO PERCENT) RW								
													RT, ML

Sampler Relinquisher by: (sig) Tim Jones	Date/Time 10-25-02 1435	Received by: (sig)	Date/Time
Relinquished by: (sig)	Date/Time	Received by: (sig)	Date/Time
Relinquished by: (sig)	Date/Time	Received by: (sig) MWalmsley	Date/Time 10-25-02 9:10

Remarks: Fax Results to Tim Jones 678-354-0330